S. Hrg. 100-1059

DEFENSE ECONOMICS ISSUES

HEARINGS

BEFORE THE

SUBCOMMITTEE ON INTERNATIONAL TRADE,
FINANCE, AND SECURITY ECONOMICS,

THE

SUBCOMMITTEE ON ECONOMIC RESOURCES,
COMPETITIVENESS, AND SECURITY ECONOMICS,

AND THE

SUBCOMMITTEE ON
NATIONAL SECURITY ECONOMICS

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

NINETY-EIGHTH TO ONE HUNDREDTH CONGRESSES

FIRST AND SECOND SESSIONS

OCTOBER 10 AND 11, 1984, SEPTEMBER 6 AND DECEMBER 16, 1985,
JULY 18, 1986, OCTOBER 26, 1987, AND DECEMBER 21, 1988

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE
45-261 WASHINGTON : 1989

J841-22

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

45-261 0 - 89 - 1

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DEFENSE ECONOMICS ISSUES

WEDNESDAY, OCTOBER 10, 1984

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON INTERNATIONAL TRADE,
FINANCE, AND SECURITY ECONOMICS
OF THE JOINT ECONOMIC COMMITTEE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room SD-562, Dirksen Senate Office Building, Hon. William Proxmire (vice chairman of the subcommittee) presiding.

Present: Senator Proxmire and Representative Scheuer.

Also present: James K. Galbraith, deputy director; and Richard F Kaufman, general counsel.

OPENING STATEMENT OF SENATOR PROXMIRE, VICE CHAIRMAN

Senator PROXMIRE. The subcommittee will come to order. Numerous military spare parts pricing scandals raise important questions that have not yet been adequately addressed by the Department of Defense:

First, what is the underlying cause of the huge price markups that have been seen in the case of coffeepots, screwdrivers, hammers, armrests, and other common items?

Are the price markups high for relatively few things or are they high for everything the Pentagon buys? Should we be talking of all weapon parts or only spare parts?

How do the prices of what the Pentagon buys from the large defense contractors compare to the prices of smaller companies?

To begin to answer these questions I wrote to Air Force Secretary Orr on February 15, 1984, and I asked that information about spare parts pricing practices be collected on a number of specific programs under contract of six large contractors: Pratt & Whitney; General Electric, General Dynamics; North American Rockwell; Lockheed Aircraft; and Boeing.

The programs I asked about include military engines and spare parts, aircraft such as the F-16, C-5A, C-5B, the B-52 bomber, B-1 bomber, and the air-launched cruise missile.

The problem of prices and markups on weapons is not new to the Joint Economic Committee. I held hearings on this more than 10 years ago. In 1973, A. Ernest Fitzgerald testified about what defense products should cost as opposed to what they will cost under Defense Department procurement policies.

My request to Secretary Orr was inspired by an analytical breakthrough performed by Mr. Colin Parfitt of Mr. Fitzgerald's office. Mr. Parfitt, who is one of our two witnesses today, along with Mr.

Fitzgerald, using the concept of standard labor hour costs, analyzed the prices and markups of spare parts manufactured by Pratt & Whitney and found that they were several times what would be expected in commercial manufacturing. I made the Parfitt report a part of the record in hearings before the House Banking Subcommittee on General Oversight and Renegotiation on September 29, 1983.

In my February 15 letter, I therefore asked that the data to be collected at my request be turned over to Mr. Fitzgerald's office for analysis. The results of that analysis are the subject of today's hearings.

I want to welcome A.E. Fitzgerald, Management Systems Deputy, U.S. Air Force; and his associate, Colin, D. Parfitt, Special Assistant for Systems Accounting, U.S. Air Force.

Before getting into the substance of your testimony, gentlemen, I want to discuss what appears to be an Air Force effort to stifle and intimidate both of you and perhaps intimidate this subcommittee as well.

Before I do that, Congressman Scheuer has some comments.

OPENING STATEMENT OF REPRESENTATIVE SCHEUER

Representative SCHEUER. Well, there aren't very many things in life that are certain, Senator, but one of the certainties, one of the eternal verities, is that nobody in the Armed Services is going to intimidate the chairman of this hearing. He is psychologically and psycopathologically incapable of being intimidated and he will be heard.

Senator PROXMIRE. I don't know about that psycopathological. It sounds awfully good anyway.

Representative SCHEUER. It is good and I join you in feeling the same way. I hope that sometime during this morning you gentlemen will answer a frustration that has been bothering me for more than a decade, for the two decades I've been here, and has been bothering Senator Proxmire and it's bothering the American people. They are really fed up to here with the $3 hammers that end up costing $7,000 or $700. It puts the whole system of Government in utter disarray. We lose any sense out there that we are competent, that we are capable, that we can make a difference. I don't distinguish between the executive branch and the legislative branch, or the House, or the Senate, or Democrats, or Republicans. It's the Government that is incompetent when they read about screws costing 1,000 times what they should be costing at retail.

Now this is not a new problem. Ernie Fitzgerald just mentioned that he and I met over a decade ago. He appeared before this committee under the distinguished chairmanship of Senator Proxmire about a decade ago. I hope you will address yourselves, at least in passing, this morning to what the institutional problems are in our Government that seem to make us incapable of zeroing in on the problem and curing it. Why is it out of control? What's wrong with the oversight capability of the Defense Department, their inspector general, their other systems and processes? What has been the failure of our Congressional oversight both oversight of the Armed Service Committee and the oversight that this committee has been able to provide? Why haven't we over in the Congress been able to do the job? We did it with the EPA last year. We cleaned up the mess, and had the top 20 officials fired, and zeroed right in on the problem. Why can't we do it with our problem of procurement in the Armed Services Committee? What is lacking? what are the gaps?

What new institutional framework, if any, would you suggest? Do we need another Truman Wartime Investigating Committee? Do we need something new or do we have to hone up our tools and use what we've got more intelligently, more courageously, more forcefully?

As I say, Senator Proxmire and I reflect the utter frustration and anger of the American people of this continuous cost of being ripped off, and we are looking for answers if possible. How do we zero in on the problem institutionally so the Congress can play a major role in bringing some sanity into the chaos over there?

Thank you very much, Senator.

Senator PROXMIRE. Thank you very much, Congressman Scheuer, for a fine statement.

Mr. Fitzgerald, before you make your statement, if you have one, I want to ask you some questions as I said about the situation that you find yourself in and the subcommittee finds itself in, and my questions will disclose what I'm talking about.

I note from your prepared statement that it's stamped "For Official Use Only" on each page. Did you mark it so, or was it done by your superiors, and can you explain the legal or other significance of that warning of "Official Use Only"?

TESTIMONY OF A. ERNEST FITZGERALD, MANAGEMENT SYSTEMS DEPUTY, OFFICE OF THE COMPTROLLER OF THE AIR FORCE, ACCOMPANIED BY COLIN D. PARFITT, SPECIAL ASSISTANT FOR SYSTEMS ACCOUNTING; AND THOMAS AMLIE, SPECIAL ASSISTANT FOR TECHNICAL SYSTEMS

Mr. FITZGERALD. Senator, I'm at a loss to explain what that means in this context. This marking was applied after the statement left our office. We had taken part in long negotiations, both my associate and I, to try to get the statement cleared. We had agreed, since you and your subcommittee already had the basic data from which these summaries were drawn, to remove the company names, but apparently that was not enough and we were told that the "Official Use Only" stamp would be applied.

We learned it after it had been delivered to your subcommittee. Mr. Kaufman, the JEC general counsel, called it to our attention. The acting general counsel of the Air Force has not been able to explain to us just what that means in the context of this hearing.

We met as late as 9:35 this morning with the new Assistant Secretary of the Air Force and the acting general counsel and produced a letter which I have delivered to you and Congressman Scheuer before the hearing commenced and that's the best clarification that we have at the moment. It's simply a warning that the information contained in the attachments to our very brief prepared statement may, according to the general counsel, contain proprietary information of contractors. I think this is a red herring frankly, but when

I'm warned by the general counsel of the Air Force that I may go to jail as a result of revealing these rather startling high prices, well, I must give that some consideration.

Senator **Proxmire**. Well, now, we are all patriotic Americans. We certainly don't want to disclose anything that's classified, or anything that would comfort the enemy, or would adversely affect our country. We also don't want to disclose any proprietary information that might do damage to an American corporation. We know that that would be a serious mistake and grossly unfair on our part.

But this letter that you have which I'm going to read—a memorandum which is what it is—says the following:

> Memorandum from Mr. Fitzgerald. Subject: Congressional Hearings before Senator Proxmire. The following is provided as a result of between you and Mr. Richard Carver and Mr. Richard Harshman and myself, concerning your testimony before Senator Proxmire's subcommittee today. The financial information which is included in the attachment to your testimony may contain confidential or proprietary financial information which is not publicly disclosable either under the Freedom of Information Act or 18 U.S.C. 1905. It is suggested that you apprize Senator Proxmire of this possibility and indicate that the mark "For Official Use Only" was made on each of the attachments to alert him to this possibility. An inquiry will be made to appropriate Air Force personnel to confirm whether the financial information is in fact confidential or proprietary financial information.

Now this puts the subcommittee in a very, very difficult position. It says "an inquiry will be made to appropriate Air Force personnel." Now we invited you to come up and testify sometime ago and obviously it seems to me it's the duty of the Air Force, and you, Mr. Parfitt to determine before you come whether anything you say is confidential, therefore should not be disclosed, whether it is proprietary, and therefore should not be disclosed, and this kind of vague statement which says "may contain"—it doesn't say it will—"may contain confidential or proprietary information" and "an inquiry will be made later" seems to me suggest we not only should be cautious but that maybe fearful that what we are disclosing is information that is either classified or proprietary. So it puts us in a delicate position, but it seems to me we have to rely on your good judgment.

You have been in your position through considerable effort on your part and courage on your part for many years—what is it now, 16 or 17 years at least—and you understand what is proprietary, and what isn't, and what is classified, and what isn't. And I have been in this job for 27 years and I'll just have to do my best to try to be as careful as possible as we go along.

Let me proceed on this line. When did you first learn that the Air Force intended to restrict and delete part of your testimony and what did you do?

Mr. **Fitzgerald**. I think the first indication—Mr. Parfitt may have a better recollection of this than I since he's done more of the detail work—was late last week, was it not, Colin?

Mr. **Parfitt**. Yes, I think so.

Mr. **Fitzgerald**. And my first positive indication—and I furnished copies of this correspondence to the Joint Economic Committee counsel—was when Mr. Parfitt told me and wrote me a memorandum on October 5, which was Friday, in which he recorded that he had cautioned not to violate this statute and instructed that he should respond to your and the other members questions in generalities, not specifics. In other words, he should waffle. And to me, this was totally unacceptable, so I contacted the legislative liaison people and the acting general counsel and asked for specific clarification which, as I pointed out in the second memorandum I submitted for your record or your study if you wish, dated on Monday, but I had previously expressed it verbally—on Tuesday, I'm sorry—to specifically verify whether or not the data contained herein was really secret, not in a classical security sense. There's no question about that. There's no national security information involved whatsoever, but the fact is that when I was involved in field activities in procurement, the big prime contractors swapped such information routinely through negotiating subcontracting.

I asked the acting general counsel to verify whether this was still done. Back when the General Accounting Office was involved in the contract audits, they had a firm policy, which I will submit for the record later, stating tht because Congress was authorized by law to receive such information that the statute, 18 U.S.C. 1905, did not apply to information they furnished.

I also pointed out to the general counsel that this information is readily available to the people who go so easily through the revolving door. It's practically an impossibility to erase from their memories or for that matter from their records the cost data which they have access to.

Senator PROXMIRE. What you're talking about is that somebody may come to work at the Defense Department and then would go back to work for a defense contractor.

Mr. FITZGERALD. Sure.

Senator PROXMIRE. And having been at the Defense Department he would know the Boeing or Lockheed costs, and so forth, and how much they charged and how much their labor costs and their other costs were, and he would have that information as he goes back and forth. So that it's not a matter of keeping that proprietary information from a competitor which is what proprietary privacy is really designed to do.

Mr. FITZGERALD. That's absolutely right, Senator, and I thought the acting general counsel agreed with me on Friday that in order for information to qualify as a trade secret that it had to first be a secret. It's quite clear that this information is being kept secret from no one except the taxpayers. I can know about it, the competitors can know about, you can know about it certainly, the General Accounting Office, any one of thousands of auditors, colonels, generals, political appointees who go through the revolving door. The only people being kept in the dark are the taxpayers.

Now it becomes clear last night and this morning that the general counsel was getting his instructions from the military procurement community, the generals in charge of procurement. He had not made any independent analysis of this law, much less the other countervailing statutes which I think committee counsel is familiar with, some of which give us an affirmative duty to give you this sort of information. No mention was made of that.

Now if I were the procurement generals, I would want to cover this stuff up, too. I wouldn't want it disclosed. I understand completely their position, but I am not sympathetic to it because it's been going on for as long as I can remember and it's not getting better; it's getting worse.

As I will try to develop as the hearings go along, it appears that the procurement community, which is what the contractors and the people that deal with them inside the Government call themselves, have made these rip-offs, as Congressman Scheuer termed them, legal, at least in their own minds, and I think from what we have seen here this morning and what we have been subjected to, Mr. Parfitt and I, is that they are now seeking to make the coverup legal.

Senator **Proxmire**. Now I understand that Col. John Cox of the Air Force congressional liaison may be present.

Colonel Cox. Yes, sir.

Senator **Proxmire**. Colonel cox, can you explain why the testimony is marked "For Official Use Only" from your standpoint and how that warning is intended to restrict its use in this hearing?

TESTIMONY OF COL. JOHN COX, CONGRESSIONAL LIAISON, U.S. AIR FORCE

Colonel Cox. Yes, sir; I can explain it insofar as my impression. I am not general counsel and as legislative liaison it's primarily my duty to facilitate hearings, escort witnesses back and forth. The basis of my primary duties is congressional inquiries and constituent problems and things of that nature. But my understanding, my impression from general counsel is that the "For Official Use Only"—let me back up a little bit. When the Air Force receives information concerning cost analysis or pricing data or these figures that you have here concerning how a particular company arrived at its standard hours or cost of standard hours, that the use of that information is not to be shared by the Air Force with other competitors which you have discussed here and that, because of that, it's normally stamped "Proprietary data" or some other legend on the information so that when the Air Force in its capacity as a recipient of information does not violate the trust of the contractor which gave it this information in order to release that information to the committee says that this is for official use only. And my impression of that—and here again I'm not general counsel and I'm not serving in a legal way—it seems to me that that is submitted for the business of this committee. In other words, the Air Force is giving you that information in the course of its official business rather than in any other way.

Senator **Proxmire**. Well, can you explain, Colonel Cox, why the first page of the statement in which Mr. Fitzgerald and Mr. Parfitt did not give much more than their names and titles is stamped "For Official Use Only"?

Colonel Cox. No, sir; other than just all of them.

Senator **Proxmire**. So they just indiscriminately stamp everything in the report "For Official Use Only," but you say this is for the official use of the subcommittee. Does the Air Force recognize that this hearing is an official use?

Colonel Cox. I would assume so. It's for official use only. The Air Force has given the information to the subcommittee. You have the information. But, Senator, please don't accept my word as authoritative or a legal judgment on that point.

Senator **Proxmire**. All right, sir. On the basis of what you've just told me then, I'm going to put the entire prepared statement here in the record so it will be in the printed record of the hearing. You have explained I think satisfactorily what you mean and I can only interpret that as meaning that this can be in the official record of the meeting and available to everyone who wants to look at it.

[The joint prepared statement of Mr. Fitzgerald and Mr. Parfitt follows:]

JOINT PREPARED STATEMENT OF A.E. FITZGERALD AND COLIN D. PARFITT

MR. CHAIRMAN:

We are pleased for the opportunity to address your Committee.

On 15 February 1984, Senator Proxmire wrote to the Secretary of the Air Force about an Air Force report prepared by Mr. Colin D. Parfitt, Assistant for Financial Systems in the Air Force Secretariat, concerning Pratt & Whitney cost accounting system and pricing formula.

Senator Proxmire requested that the Parfitt report be updated and expanded by collecting comparable data and performing similar analyses with respect to six contractors in specific programs.

The attached data package consists of information which was compiled in response to Senator Proxmire's original request and subsequently modified to correct misconceptions discovered in the review process. This information was compiled by the Air Force Systems Command whose representatives have assured us of its accuracy.

We will be pleased to answer any question you may have.

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FPRA Direct Labor Cost per Standard Hour (BFL)			$13.93
Rework	.021		
Special Charges	.046		
Planning	.193		
Mfg Development	.002		
Shipping	.052		
Mfg Support	.166		
	.480 (48% of 13.93) =		6.686
			20.616
Tooling	.5% of 15.26		.076
Quality	31.5% of 14.92		4.700
Finance	1.0% of 15.33		.153
			25.545
Fringe Benefits	46.0% of 25.545		11.751
			37.296
On Line Planning	1.021 hrs @ .38		.388
Inventory Mgmt	1.81 hrs @ 4.42		8.000
Overhead			
Production	1.48 hrs @ 17.89	26.477)	
Quality	.315 hrs @ 11.68	3.679)	
Program		)	
-Base	8.1% of Base $75.840	6.143)	36.299
			81.983
G&A	15.5% of 81.983		12.707
			94.690
Cost of Money			
Production	1.48 hrs @ 2.39	3.537	
Quality	.315 hrs @ .96	.302	
Program	.02% of $75.840	.015	
Inventory Mgmt	1.81 hrs @ .19	.344	
G&A	.30% of 81.983	.246	4.444
TOTAL ATTRIBUTED COST			99.134

Profit ranges, in general, from 6% to 16% depending upon the particular mix/ratio of cost elements and the assigned degree of risk.

Attributed cost $99.134 + 6% (94.690)= 104.815

Attributed Cost 99.134 + 16% (94.690) = 114.284

FPRA Direct Labor Cost per Standard Hour			$15.90
Misc & Picks	.083		
Rework	.143		
Special Charges	.002		
Mfg Development	.009		
Mfg Support	.509		
	.746 (74.6% of 15.90)		11.861
			27.761
Tooling	2.6% of 15.96		.415
Quality	31.1% of 18.05		5.614
Mfg Engr	30.9% of 15.90		4.913
Prog Mgmt	6.8% of 18.92		1.287
Buyers	3.7% of 17.87		.661
Finance	3.9% of 17.70		.690
			41.341
Fringe Benefits	41.5% of 41.341		17.157
Overhead:			
Engineering	.068 hrs @ 7.76		.528
Manufacturing	2.429 hrs @ 16.19		39.326
Other Costs			
Direct Charge	$98.352 @ 3%		2.951
On Line Planning	1.252 hrs @ $.62		.776
			102.079
G&A	14.7% of 102.079		15.006
			117.085
Cost of Money:			
Engineering	.068 @ $.80	.054)	
Mfg	2.429 @ 2.08	5.052)	
G&A	.3% of $102.151	.306)	5.412
TOTAL ATTRIBUTED COST			122.497

Profit ranges, in general, from 6% to 16% depending upon the particular mix/ratio of cost elements and the assigned degree of risk.

Attributed cost $122.497 + 6% (117.085) = 129.522

Attributed cost $122.497 + 16%(117.085) =141.231

Factory Direct Labor Cost per Std Hr			13.45
Indirect Labor O/H	(89.265% x $13.45)		12.01
			25.46
Fringe Benefits	42.1% ($25.46)		10.72
Manufacturing Overhead			
Reg Eng & Prog Mgmt	36 Hrs @ $8.68 =	$ 312	
Other Labor	597 Hrs @ $19.06 =	11,379	
Finance	11 Hrs @ 0		
	644	$11,691	
	11.691 ÷ 347 Hands On Hrs		33.69
On Line Planning 1 Hr x .055 x $5.95			.33
G&A			
Total Labor		25.46	
Fringe Benefits		10.72	
Mfg O/H		23.69	
On Line Planning		.33	
15.6% of		70.20 =	10.95
			81.15
Cost of Money 1% (81.15)			.81
			81.96
Profit 12.5% (81.15)			10.14
	Total		92.10

	Hrs.	$	
Estimated Actual Direct Hands-On Labor Price	90.03	(13.43) =	$1209.10
Add: Planning time	6.48	(14.60) =	94.61
Quality Assurance	8.28	(14.40) =	119.23
			1422.94
Overhead (approx 204.68% of $1422.94)			2912.56
Factory Labor Cost (FLC)			4335.50
General & Administrative 64.2% of 1422.94			913.52
Spares Admin 14% (FLC)			
Packing & Crating 2.75% (FLC)			
add 16.75% (4,335.50)			726.17
			5975.19
Profit 14.5% (5975.19)			866.40
			6841,59
Direct Labor Standard Hours Work Content			54.0
Cost per Standard Hour			$ 126.70

Component part labor - formula priced	$3038.66

Direct Labor Std Hrs Work Content

Set Up	.0189
Run	8.8983
	8.9172

Price Per Standard Hour	340.76
Electronic Fabrication labor - formula priced	1051.15

Direct Labor Std Work Content

Set Up	.733
Recurring	19.35
Total Hours	20.083

Price per Standard Hour	$ 52.34

Direct Labor Cost per Std Hour		$10.72
Labor Variance	33.51%	3.592
Total Base Labor Cost		14.312
Mfg Overhead	390%	55.817
		70.129
Unreported Losses Expense	.85% of 70.129	.596
		70.725
Box, Pack, Ship	4.65%	
Prod Line Log Supp	2.36%	
Prod Line Productibility Eng Supp	1.80%	
	8.81% of 70.725	6.231
		76.956
Govt Factor Expense	.16%	
Govt Div Expense	1.10%	
	1.26% of 76.956	.970
		77.926
G&A	11.66%	
IR&D	9.52%	
	21.18% of 77.926	16.505
		94.431
Cost of Money	29.18% of 14.312	4.176
		98.609
Profit	15% of 94.431	14.165
		112.772

	Dept #	Std Minutes	Minute/Rate Factor	Extended $
Deburring	8744	73.421	.1543	11.329
Misc Detail	8743	342.204	.1811	61.973
Large Welded Assy	8753	65.513	.1791	11.733
Paint & Preserv	0451	2.540	.1718	.436
Compressor Stator Assy	8752	10.138	.1693	1.716
Turbine Exh Case	8751	144.694	.1590	23.006
Misc Bonding	0420	2.180	.1673	.365
Surface Treatment	8412	118.876	.1704	20.256
		759.566		130.814

$ ÷ (Std Minutes ÷ 60) = Direct Labor Cost per Standard Hour

130.514 ÷ (759.566 ÷ 60) = $10.33321 =	10.333
Labor Variance + 139.8% =	14.446
Total Direct Labor	24.779
Mfg O/H + 469.6% =	116.362
	141.141
Shop Tool (Total labor x 6.6%) =	1.635
	142.776
Inv Adj (.07%)(142.776)	.099
	142.875
Spec Admin (.17%)(142.875)	.243
	143.118
General Overhead (3.15%)(143.12)	4.508
	147.626
CAS 414 Mfg Div	6.406
Manufacturing Div Transfer Cost	154.032
EAPS (1.15%)(154.032)	1.771
	155.803
Warranty (.02%)(155.803)	.031
	155.834
G&A (11.5%)(155.834)	17.921
	173.755
CAS 414 Govt Prods Div	.268
Govt Prods Div Cost	174.023
Profit (13%(174.023 -6.406 -.268)	21.755
Total	195.778

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	Hours	Rate	$
Mfg Fab	1.000	14.70	14.700
Research & Engr (5% of line 8 hrs)	.050	17.51	.875
Logistics	--		--
Sum 1 & 2	.050		.875
Engineer Burden aplied to line 3 hrs	.050	16.80	.540
Sum 3 & 4			1.715
Mfg Sch/Mgmt 20% (line 8 & 15 hrs)	.206	14.96	3.082
Mfg Engr'Plng 7% (line 8 & 15 hrs)	.069	14.95	1.036
Sum 9 - 10	.275		4.118
Dimensional Special Tooling (DST)			
Maint 2.7% (16.50)	.027	16.53	.446
Non-DST .1% (14.80)	.001	14.80	.014
Sum 12 - 14	.028		.460
Shipping 1.7% (line 8 hrs)	.017	14.11	.240
Mfg Control 7.5% (line 8 + 15 hrs)	.077	14.95	1.151
Spares 1.0% (" " ")	.010	16.00	.160
Qual & Rel Assur 9.2% (lines 8,16,19 hrs)	.094	14.59	1.372
Tool Insp 3.5% (line 15 hrs)	.001	16.00	.016
Qual Spt 5.0% (lines 8,15,16 & 19 hrs)	.052	14.62	.759
Sums 16 - 23	.251		3.698
Sums 8, 11, 15 and 24	1.555		22.976
Mfg Burden	1.555	20.05	31.178
Sums 25 & 26			54.154
Progrom Contl .9% (lines 3,25,30,& 35 hrs)	.014		.200
Fringe .494% line 28 $			.099
Sum 28 - 31	.014		.299
			0

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	Hours	Rate	$
Tool Mat $4.31 1983 $ applied to line 15 hours	.028	4.92	.138
Ship Mat $2.18 1983 $ applied to line 16 hours	.017	2.40	.041
Q&RA Mat $.03 1983 $ applied to line 20 hours	.094	.031	.003
Sum 42 - 49			.172
MPC Applied to line 50, 5.4%			.009
Sum 38 - 41, 50 & 51			.181
Other Costs 1% of line 8 $			.147
Sum 5, 27, 32, 37, 52 & 53			56.496
G&A 5.3% (56.496)			2.994
Cat 1 IDWA			--
Sum 54 - 56			59.490
Profit 15.25% (59.145)			9.072
Sum 57 & 58			68.562
CAS 414 Engr			.036
CAS 414 Mfg			1.871
CAS 414 G&A Base			.138
Sum 60 - 64			2.045
Sum 59 & 65			70.607

The tabulation above is for one hour of estimated actual performance. The realization factor stated in supporting documentation is 2.795. This indicates that the price for one standard hour of output is on the order of 2.795 ($70.607) = $197.35.

Senator **Proxmire**. Mr. Parfitt, will you explain when and how you learned that the Air Force intended to censor your testimony?

Mr. **Parfitt**. Yes, sir; the first I knew of it was in a telephone call I had last Friday. The first I heard of it was when Mr. Timmons, the deputy general counsel of the Air Force, called me on the telephone last Friday and he had, as I understand it, several people with him in his office, including Colonel Cox, and they wanted me to go down there and talk with them. I asked him what about and he said it has to do with my testimony. And I said, why don't we talk about it on the telephone. Apparently he was amenable to that because he proceeded to discuss it and in doing so he did tell me that the information probably was proprietary and I said, "Well, I imagine it would be." He suggested that perhaps the information was proprietary to the contractors and I said, "Yes, probably that's the case. If you ask the contractors, they will almost certainly say that that is so." And he went on to discuss the notion that they would have to stamp these things with a stamp across the bottom saying it was all proprietary and confidential information. So I said, "Well, if you feel that way about it, perhaps we could put the stamp on and go ahead and delete all the names of the companies." And at that time they did not elect to delete the names as I understand from the conversation I had with him, but he did go on, as Mr. Fitzgerald said, to caution me that I might violate this 18 U.S.C. 1905, which I understand is a criminal statute, and I should be very careful and should speak in generalities and respond to questions in generalities rather than specifics. That was Friday morning last week.

Following that, I reported it to Mr. Fitzgerald. I reported to him on the telephone conversation and he asked me to write a brief memorandum on it right then, which I did, and had it typed up.

In the meantime, he called the general counsel and was discussing the subject with them and Timmons later came around to our office and I was present while Mr. Fitzgerald discussed the whole issue with him for approximately 1 hour on Friday afternoon.

Senator **Proxmire**. Do either of you know whether the contractors requested that the information supplied in your statement be considered proprietary or trade secrets or whether that was an Air Force decision?

Mr. **Parfitt**. I have no idea, sir. I think the Air Force automatically puts that on on almost everything that comes in from an Air Force contractor.

Senator **Proxmire**. Do you have any other information on that, Mr. Fitzgerald? Do you know whether that could have been or was a request of the contractors?

Mr. **Fitzgerald**. No, sir; I do not. I specifically asked our acting general counsel, Mr. Timmons, that question and I asked him if he had any personal knowledge of it himself. He said he did not. He was relying entirely on the representations made by the procurement community—that is, the military section of our Air Force headquarters responsible for contracting—and he could not explain how they failed to acknowledge the other statutes which are counter to the one he cited. In particular, we discussed 10 U.S.C. 2276 which in fact makes it a serious crime to enter into collusive agreements to keep such information from the Congress, at least in my layman's reading of the statute. He could not explain that. He had no personal firsthand information at all. It's just another case and the third such this year where the *procurement community*, as they call themselves—that is, the military staff responsible for contracting—embarrassed by disclosures have been allowed to interfere with our testimony. And I must say that I have been very patient with this, but we have just about reached the end of our rope.

Senator **Proxmire**. Now the pricing data of these companies is apparently regarded or may be regarded by the Air Force as being proprietary information and trade secrets. I think you have already told me that you disagree with that view, is that right?

Mr. **Fitzgerald**. Yes, sir; I certainly do, but having been warned by my own counsel, the Air Force counsel, that I'm subject to being sent to jail if I reveal it, I obviously have to be careful.

Senator **Proxmire**. Now I think you've indicated but I want you to confirm it yes or no, is it your view that because these companies provide the same pricing data to each other when they do subcontract work that the information should not be considered proprietary or secret?

Mr. **Fitzgerald**. Yes, sir; at least in my experience, and if my experience has changed I would stand corrected and suggest that we go back to the old rules. I suggested to Mr. Timmons that he test my thesis by getting whatever is collected by way of cost and pricing data from one of the big prime contractors and as I've indicated in my memorandum pointed out to him that such information could literally be obtained in a matter of minutes or an hour at the most. That has not been done.

Senator **Proxmire**. Now do either of you feel the officials in the Air Force have attempted to intimidate you and discourage you from giving us in a completely candid and open manner the full results of your study?

Mr. **Fitzgerald**. Absolutely; there's no question about that in my mind, Senator.

Senator **Proxmire**. Mr. Parfitt.

Mr. **Parfitt**. Yes, Senator.

Senator **Proxmire**. Can you discuss briefly why some of your superiors seem to be so nervous about your testimony? Is it possible that they fear the consequences of full disclosure about how the pricing system works and why defense markups are so high?

Mr. **Fitzgerald**. Yes, I believe that I understand that, though I want it made clear that this is my opinion, that General Wise, the head of contracting, would probably disagree with me. But I think what is embarrassing here is the notion that the spare parts horror stories that we have all become familiar with are not isolated examples but, rather, are the result of a faulty approach to pricing procurement throughout the acquisition programs of the Department of Defense.

In other words, the spare parts on Pratt & Whitney engines, for example, which have been in the news for the last 2 years—it's quieted down recently but really started this avalanche—were not isolated examples, but were in fact so horribly overpriced exactly because they were priced just like the entire engine.

When you see a beautiful military airplane flying overhead powered by a Pratt & Whitney engine, what you're seeing is a flying collection of overpriced spare parts flying in close formation. And that was the import of the Parfitt report which in my mind was the definitive report on what's wrong with spare parts, and he can explain that better than I, but Parfitt's report which was completed in December 1982, and was based on information for which the contractors claim no privilege whatsoever by the way, demonstrated conclusively that the spare parts markups as they are called in the trade, markups on standard hours and standard labor—that is, the amount of time and the amount of material that should go into the product—were the same—the percentage markups were exactly the same on a nut, a bolt, a washer, or an entire engine.

The difference is that the ordinary taxpayer and most laymen don't understand. They have no frame of reference for understanding the overpricing of the entire engine, but they can understand the piece parts and the reluctance we see today, I believe, is the reluctance to bridge that understanding, which I believe the Parfitt report helps with, that the spare parts are representative of overpricing generally.

Senator PROXMIRE. Now before we get into the substance, I'm going to ask Congressman Scheuer, because I think he has a question relating to the approach which the Air Force made to you and what seems to me may be classified as an attempt at intimidation.

Representative SCHEUER. Well, Senator, I suppose if I were an Air Force procurement officer, or the head of the Air Force, or armed services procurement system, I would be embarrassed. I would be nervous. I would be anxiety ridden if this information became public because it's very damning.

There's an old cliche "knowledge is power." And what we are trying to do here is to acquire the knowledge so that we can use our power of oversight and use our power to legislate to remedy this situation. But we must have the knowledge and knowledge isn't just a set of cream puffs. Knowledge is a set of, in this area, a set of specific facts, specific abuses, whether it's a nut, a washer, an engine, or a coffeemaker. This is what spells out the story and this is what makes it intelligible to Members of Congress, and also to the press, and to the public.

So we must have specific detailed instances of what this is all about. That's what brings it all to life and puts meat on the skeleton.

Now we do have a situation here—we don't know whether they are trying to intimidate you or not. Your history over the last decade or so indicates that you, too, are a pretty tough guy to intimidate, so it seems to me that they would have some sense that that was a rather futile exercise. But be that as it may, they certainly have tried to put this whole thing under a cover and to make it difficult for us to get the details and specific factual information to either perform oversight or to legislate.

What do you think is the remedy for this? What do you think we have to do in terms of either making a statement, appending some kind of a statement to a record, or perhaps legislating, that would lift the encumbrances or liberate you to give us the information we urgently need and that the American public clearly wants us to have? What do you think ought to be done to liberate you, and Mr. Parfitt, and others like you to shovel it out as it is, just the facts, while at the same time protecting the companies from whatever their real and legitimate proprietary interests would be?

In the drug field, for example, when they file with the Food and Drug Administration for a new breakthrough in drugs for heart, cancer, stroke, or whatever, the ingredients and the processes of developing that drug are proprietary and are not public. I'm not certain that their pricing policies come under that category.

Tell us what you think we ought to be doing if you were sitting up here and you wanted to be fair to the companies where they were entitled to fairness, if you wanted to be fair to the public, too, and their right to know, and our right to know, what would you have us do?

Mr. FITZGERALD. Well, I would make, first off, Congressman Scheuer, a clear distinction between negotiating contracts, which is totally what we are dealing with here, and those contracts that were let with advertising bidding where we do not get and do not require and don't have access to cost and pricing data.

The fact is, Congress has already passed laws—the Truth-in-Negotiation Act and others that we can cite—requiring such information, in my view, be made available to you on negotiating contracts. We are talking about contracts that are not open to just any bidder, that are negotiated with the likes of Lockheed, and Boeing, and General Gynamics, and those folks, the same great Americans who come around for bailouts under Public Law 85-804 and claim to be part of the public domain when they're in trouble. This is what we are dealing with here, to make a clear distinction between that community and those folks who live in the competitive marketplace. We re not talking about the competitive bidding marketplace.

Second, you asked about legislation. You already have legislation on the books that makes it a serious crime to obstruct witnesses, or to retaliate against them, or to obstruct the working of a committee. Title 18, United States Code 5005 is crystal clear in that regard. The problem is enforcement. We have no way to enforce it. The Justice Department, as I believe Senator Proxmire has found out in the General Dynamics case, is all too often on the other side. We do not have in this country a people's attorney at the Federal level such as we have at the State level, but the Attorney General is appointed by the President, and is a member of the team, and it's not realistic to expect that the Attorney General, who is one of the President's men, would act to throw in jail, for obstructing hostile committees, as they may view it, the Secretary of Defense. It's not reasonable to expect that and it doesn't happen.

So there must be some way devised so that individuals, such as Mr. Parfitt, and I, and my other associates, can act in our own self-defense, and we don't have such a means, not a readily available one, after my experience in court.

But mainly, I think what has to be done is to change the motivation. In your opening statement you spoke of the problem. Now, you've got to put yourself in the position of the procurement community—that is, the giant contractors and the people inside Government who deal with them. Except for bad publicity, they do not have a problem. You've got to understand that none of these horror stories have constituted real, genuine business problems such as you would encounter in your own business if you were overspending, because the Congress and the Department of Defense have solved the spare parts problem by rejecting the Parfitt recommendations in their essential features and adopting, instead, the recommendations made by General Slade's committee which, when boiled down, add money. Spare parts are costing too much? Appropriate more money. That's what we've done. So you've got to understand that from their viewpoint the problems are not high costs. The problems are very easy to identifly. They are called Fitzgerald, Parfitt, and Mr. Thomas Amlie, our other associate. Bad publicity and the things that go with it are the problem, rather than high costs, and I'm afraid that poverty is the only remedy for that.

Representative SCHEUER. Poverty?

Mr. FITZGERALD. Yes, sir, a word unknown where we work.

Representative SCHEUER. Well, if the Defense Department won't put this contracting community, that you are speaking of, under a somewhat tighter leash and make them more accountable, how should the Congress do it?

Mr. FITZGERALD. Well, obviously your strongest lever is the power of the purse, and as long as you continue to appropriate ever-increasing sums for the spare parts, the weapons systems or whatever, the procurement community is going to take that as an affirmation of what they are now doing. See, they are strong adherents to the doctrine of former Attorney General John Mitchell, who taught us, or tried to teach us, that we should watch what people do, not listen to what they say. And what Congress does is appropriate plenty of money to accommodate all these horror stories. So they don't realy sense that anybody is too angry at them, except for embarrassing them, and that can be covered by rhetorical means and by passing such laws as those that Congress has passed which tend to make what we do now in the way of sweetheart negotiations the same as competition. Now that's a very strong negative message to the procurement community, negative in terms of telling them to shape up. Mr. Parfitt may have other views.

Mr. PARFITT. No.

Senator PROXMIRE. Now let's get into the study itself. Do you have any opening remarks that you would like to make, Mr. Fitzgerald, before we get into questions?

Mr. FITZGERALD. No, Senator, nothing other than the prepared statement which we submitted which we thought was pretty straightforward, though arcane and a little technical. The information as you stated in your opening statement was compiled in response to your original request and was subsequently modified to perhaps correct some misconceptions that Mr. Parfitt discovered in the review process and the information we presented to you was compiled by the Air Force Systems Command whose representatives have assured us of its accuracy.

I should add that the bottom-line figures in the attachments which are really the essence of our testimony in at least one instance are optimistic. In the case of the—I guess we can't use the contractor's name but it's on the B-1 program—the ratio of actual hours—that is, hours expected to be spent—is standard hours which are the hours that should be spent, are taken from a downstream period, the middle of lot 3, are they not, Colin?

Mr. PARFITT. Yes, I think so, the middle of 1985.

Mr. FITZGERALD. The middle of 1985. so these figures are in the category of manna, some hopeful future accommodations. The present figures are considerably higher than the figures shown.

So I would say that based on all our experience—and we have Mr. Amlie here with us, our other associate, who's made a somewhat broader survey of weapons systems dollars per standard hour—I would say that the figures are quite conservative and do not reflect adversely in a factual sense on the contractors and we were prepared to answer your questions within the limits of our orders.

Senator PROXMIRE. First of all, can you discuss your findings in terms of the markups by each contractor or have you been ordered to not mention the names of the companies?

Mr. FITZGERALD. Well, Colin, I think we have been ordered not to mention the names except for I think the fact that Pratt is in the public record already, thank to you, Senator, Pratt & Whitney, the pricing formulas as the TF-30 engine, which is something that we have been making for more than 20 years. It's not new.

Senator PROXMIRE. The attachments to your prepared statement cover nine cases of price markups on military spare parts.

Mr. FITZGERALD. Yes, sir.

Senator PROXMIRE. I understand the parts are not ordinary tools or household items but include aircraft engines, engine parts, structural mechanical parts, and electronics. Is that correct?

Mr. FITZGERALD. Yes, that's correct.

Senator PROXMIRE. Can you briefly explain your approach to measuring the price markups?

Mr. FITZGERALD. Yes. I shall defer to Mr. Parfitt.

Senator PROXMIRE. Mr. Parfitt, how do you measure those?

Mr. FITZGERALD. How do we arrive at the price markups?

Mr. PARFITT. The cost of markup is based upon submissions that I received from the plant representative offices at each of the plants in question. These are the actual kinds of numbers they use. These are the actual markups that are employed by the defense contractors, the aerospace firms in the case.

Senator PROXMIRE. Now your first attachment, we will call it contractor A—shows an actual wage rate of $13.93 per hour. I take it that was the amount that was paid to the worker.

Mr. PARFITT. Yes.

Senator PROXMIRE. And the total attributable cost after markup of $99.13. What does that mean in plain English?

Mr. PARFITT. Well, that means that the topline is described as FPRA, direct labor cost per standard hour. That means that our FPRA of the contractor administrator has negotiated a forward pricing agreement to pay $13.93 per hour. So if you price that out with all the additive items——

Mr. **Fitzgerald**. Per standard hour.

Mr. **Parfitt**. Per standard hour, if you ādd to that the various additives the contractor does add in the process of pricing the amount he's going to charge the Government, you come down to a bottom line of a total cost attributed to that 1 hour, including all the various overheads and general administrative costs and other markups of one kind or another $99.13.

Senator **Proxmire**. Is it correct to say, then, in this case where the factory worker is paid $13.99 an hour the Government is charged $99.13 for an hour's worth of work?

Mr. **Parfitt**. No, sir; if you look at the footnotes, that is the cost they attribute to an output of 1 standard hour and they have a profit ratio in the case of this contractor that varies from 6 to 16 percent, depending upon the risk that they perceive as being involved in the particular work that they are doing. So the two bottom lines there are to add profits to the attributed cost and the bottom figure is 6 percent, the lowest price would be $104.81 per standard hour; and at 16 percent the price to the Government comes up to $114.28 per standard hour.

Senator **Proxmire**. Let me ask Mr. Fitzgerald, could you clarify this so we could have it as simple and clear as possible? I'll repeat my question. Where the worker is paid $13.93 an hour, the Government is charged $99.13 for 1 hour's worth of work. Mr. Parfitt said that wasn't quite true. How do you explain why this isn't the case? Common sense would suggest that's exactly what the situation is.

Mr. **Fitzgerald**. No, sir; the difference is profit. The contractors attributable cost is $99 and they add approximately $16 for profit in the one instance. So the Government pays the cost plus the profit. That's the total price. So we pay $116 rather than $99. We pay more than the attributed cost. We have to add profit to it.

Senator **Proxmire**. I understand. The difference between $13.93 and $99.13 is markup of various things, various elements of markup that you've indicated in your prepared statement here. Then, in addition to that, on top of that, there's a profit on the $99.13.

Mr. **Fitzgerald**. That's correct. The contractors are not required to have any single format or stub, as the accounts would call the items that are listed here.

Senator **Proxmire**. So the higher their costs, the higher their profit?

Mr. **Parfitt**. Yes, sir.

Mr. **Fitzgerald**. Yes, sir.

Senator **Proxmire**. It's an incentive then to make that cost as high as possible, to build up that $13.93 with all kinds of overhead, whatever overhead you can throw in is going to increase your profit?

Mr. **Fitzgerald**. As long as you don't label it for such objectionable items as bribes or prostitutes or something like that, the tendency is to allow whatever their cost is. If I could put this picture up, it might explain the whole thing.

[Slide.]

Mr. **Fitzgerald**. This is very difficult to read, but this is the definitive statement on what constitutes a reasonable price taken from an audit report of spare parts prices done by the Air Force auditor general this past March, and under the heading, "Pricing Methods/Analyses" is the quote:

> One definition of a fair and reasonable price included in the Armed Services Procurement Manual is a price that closely approximates the seller's cost to make or acquire the part plus a reasonable profit.

Now that, Senator, is the essence of what's wrong with negotiated military procurement because as long as the contractor can be assured of keeping the business or a given amount of business, when he does have an incentive to maximize costs, to maximize allowable costs. He does not have an incentive to maximize the type of costs that would be thrown out.

This statement is why you see such explanations for exorbitant prices as this cost in pricing data which is selectively released by the procurement people when they think it serves their purposes. This is the price buildup for the coffeepot or the hot beverage unit, I'm sorry. The unit buildup was $2,856 for material and obviously if it's negotiated procurement we're using this formula, this policy that I just recited. He has no incentive to drive down the price from his subcontractors. You have labor, 137 hours, to put it together for $1,181, about $8 an hour. It's relatively inexpensive, $8.60. Overhead for one coffee brewer, $1,760. That would support a lot of Gucci-shod vice presidents. Administrative costs—the rent and the utilities and so on—$718, and then the profit percentage of $548. Now it doesn't add up to the announced price, but that's close enough for Government work.

Senator PROXMIRE. Now contractor B pays $15.90 hourly but charges the Government $122.49 for an hour's worth of work. I take it, on top of that, there's a profit?

Mr. FITZGERALD. Yes, sir.

Senator PROXMIRE. So for an hour's worth of work, it's $15.90 and the Government pays—the worker receives $15.90 I should say, and the Government is charged $122.49 plus the profit on that?

Mr. PARFITT. If I could give an illustration, on the same contractor for different type production and different type items, that's his cost, what he asserts to be his cost of doing 1 hour's work, $122.49. So that again, he adds profit which, depending upon a particular thing that he's working on or making, can range from 6 to 16 percent. So the price to the Government for that 1 hour of output ranges from a low of $129.52 to a high of $141.23, the two bottom lines on the page.

Senator PROXMIRE. Now for contractor E you show two cases, presumably covering different parts. In one case the Government is charged $340.76 for 1 hour's worth of work and in the other case the charge is $52.34. In other words, they charge more than six times as much in one case as in the other for the same amount of time at least.

Can you explain these extreme instances of markup?

Mr. PARFITT. No, sir; I can't. The one thing is the factory production owrk like making hardware-type equipment, and the second illustration on that page is the pricing of building things such as electronic circuit boards.

Mr. FITZGERALD. Senator, we hope the $52 per standard hour of output is true because, if so, that's the lowest price we've found in a major contractor, and if we can demonstrate that one major contractor—and this one is not notably efficient—can produce quality work at that level of cost, then we have a benchmark that we can apply to others.

Senator PROXMIRE. That's what I was trying to get at, but Mr. Parfitt gave a response which indicated that you couldn't make a comparison.

Mr. FITZGERALD. We're not certain how solid these figures are. The date submitted to us the Systems Command suggested that they might be using at least partially experienced time rather than industrial engineer standard times, but it was not clear in the materials submitted to us. But as I say, we could only rely on what was given to us by the Air Force Systems Command we are hoping it's a valid figure.

Senator PROXMIRE. Could I make a generalization that $52.34 is close to a price of an hour's worth of work charged by commercial firms and small defense subcontractors compared to the much higher amounts charged by the big contractors? Would that be valid or not?

Mr. FITZGERALD. My impression is that that would be fairly accurate, although I think probably on the high side. I think you would probably find the small contractors—Mr. Amlie can correct me on this because he's done more calling around.

Senator PROXMIRE. Mr. Amlie, why don't you come forward and sit here?

Mr. FITZGERALD. On electronics, I think they usually get work somewhat less expensively. High quality machine shop work would run more than electronics. The electronics work is done predominately by women. Mr. Thomas Amlie, one of our other associates, has talked to many more people than we on that subject.

Mr. AMLIE. Senator, for the last couple years I've talked to a lot of small business people that very much want to build aircraft spare parts for us. When they are competing, they claim that they can make a lot of money at $35 a standard hour. That includes the things like we have here, all markup and all profit. If they go over $35, they won't get the work because they are in competitive procurement.

Senator PROXMIRE. You say instead of charging $99 an hour or $124 an hour, in one case $340 an hour, they say they could do very well at $35 an hour?

Mr. AMLIE. Yes, sir. They're very happy to do that. If they go above $35, they don't get the work.

Senator PROXMIRE. And this is for the same kind of work?

Mr. AMLIE. Yes, sir; high quality machine work.

Senator PROXMIRE. And the same type of skill and experience and so forth?

Mr. AMLIE. Yes. I think you're going to have witnesses tomorrow who are small businessmen who can tell you the same thing. For very high grade electronics work for airline quality radios, radars, navigation equipment, it goes $20 to $25 per standard hour. The reason it's lower is because women do the work for about half the price.

Senator PROXMIRE. Will you remain at the table, sir, because we may have other questions for you.

Mr. **Amlie**. I would be pleased to, Senator.

Senator **Proxmire**. Mr. Fitzgerald, what do these high markups mean in terms of the overall costs of military spare parts? Do they mean we are paying five times or more what they should cost?

Mr. **Fitzgerald**. Yes, sir; that's certainly what it suggests to me. The percentage, the multiplier, would vary from one to another. The excessive markups are across the board in our experience. We have not looked at every contractor admittedly, but every one we've looked at has markups which appear excessive in terms of what their own industrial engineers say they should take internally for the factory labor and the kinds of overhead markups you would expect to see in competitive bidding.

Senator **Proxmire**. Does this mean that an engine that the Air Force pays $5 million for should only cost $1 million?

Mr. **Fitzgerald**. Not necessarily, because what we are measuring here is the prime contractor's contribution to that cost. We have not gotten as deeply into the material portion of the cost, although we suspect there's a lot of fat there.

Senator **Proxmire**. Can you show any examples of your own that applies to your findings for typical purchases?

Mr. **Fitzgerald**. I'm not sure how typical it is, but in the case of—and I think this is in the public domain which is one of the reasons I'd like to use it—in the case of the Maverick missile built by Hughes. We found on our first excursion, after Mr. Parfitt and I got back into the procurement business, that Hughes was spending 17 times as many manhours as they should according to their own industrial engineers after 93 equivalent units of production to build the Maverick missile in the factory. This was for work of absolutely abominable quality. As you may know, the Air Force and the Navy has had Hughes shut down and cut off payments because of quality problems. But that was the good news, Senator. The incredibly inefficient and low quality factory was probably the best part of the operation. It represented about 5 percent of the recurring in-house labor and overhead costs. So we have some figures that are just incredibly high, so much so that we were driven in to the spare parts business. The prices were so high as to literally not be credible in the sense that nobody would believe them. They are beginning to believe them now, after we have seen the results of their mismanagement.

Senator **Proxmire**. Congressman Scheuer.

Representative **Scheuer**. Can you tell us what the total costs of all these overcharges would be for spare parts, including engines and so forth, and what the taxpayers would save if we had a handle on this problem?

Mr. **Fitzgerald**. We do not have a definitive handle on it.

Representative **Scheuer**. I know you don't have a handle on it. What I'm saying is if we could get a handle on it, with your help and counsel, how much would we save if we could eliminate these horrendous, shocking, and, to me, offensive levels of overcharges that seem to be pervasive and systematic, as you say. They exist in every single contract that you look at. How much would we save altogether if we could give the procurement community a fair, reasonable, and proper level of profits and cut out these outrageous profits which I characterize as a ripoff and I don't think I'm using purple prose unjustifiably?

Mr. **Fitzgerald**. I think very conservatively we would save 30 percent of the acquisition budget, and I say that and characterize it as conservative because, as I testified here in 1973 using similar data, we could have saved, based on hard experience of doing genuine old-fashioned should cost studies, without benefit of competition—with competition, we could do better—we saved 30 percent average cost.

Representative **Scheuer**. Thirty percent of what?

Mr. **Fitzgerald**. Of the contractor's asking price across the board. At that time, Congressman Scheuer, the dollars per standard hour figure ranged from a low of $19 per standard hour to a high of $195. The $195 per standard hour of output was analogous to the $3,405 at Hughes. It was an outrageous example. Since that time, these figures have escalated much more sharply than general inflation would justify. So that's why I say the 30 percent coming from old, hard figures is a very conservative number.

In June of this year, Mr. Ompal Chauhan, who's one of our Air Force industrial engineers who has been working in the contract management division, estimated the savings potential at 50 percent. So we're talking about very substantial amounts of money.

Representative **Scheuer**. You tell us 30 percent or 50 percent; 30 percent was your figure and 50 percent was the figure of what?

Mr. **Fitzgerald**. Of the total acquisition budget which would run approximately—I don't know what it is this year—it's over $100 billion.

Representative **Scheuer**. So you're talking about somewhere $30 and $50 billion a year?

Mr. **Fitzgerald**. Yes, sir; without reducing quantities and probably increasing the quality of product we get. You could reinvest that and get more quantity if you wished or you could give the taxpayers a break.

Representative **Scheuer**. On that note, I will yield back to the Chair.

Mr. **Fitzgerald**. This is why the procurement community is embarrassed and this is why they resort to the tactics that we have seen, in my opinion, Congressman Scheuer.

Senator **Proxmire**. I'd like to get a general judgment on your part, Mr. Fitzgerald. In your view, how widespread are these excessive markups? Are the cases isolated ones and we're talking only about Air Force spare parts?

Mr. **Fitzgerald**. No, sir; I don't believe so. I believe that these are fairly typical and, as I say, perhaps understated examples from the major primes.

Now we're talking here of major prime contractors and you have the list of the ones you asked for and we responded to. Mr. Amlie made an informal survey of dollars per standard hour of output of whose weapon systems. You might recite that, Tom.

Senator **Proxmire**. Mr. Amlie.

Mr. **Amlie**. Senator, the numbers aside from the outrageous numbers that Ernie cited on the Maverick, the $3,400, normally the numbers go up between $150 and $300 per standard hour of output, which is as indicated about 5 to 10 times what we should be paying, and that again, as Mr. Fitzgerald said, is for the prime contractor's contribution.

Senator **Proxmire**. Now is it the view of you gentlemen that these high markups pervade not only spare parts but all weapons parts purchased by the services in the Department of Defense?

Mr. **Amlie**. Absolutely; the numbers I was citing was for guided missiles, machineguns, complete things, not spare parts.

Senator **Proxmire**. How do you know that's the case?

Mr. **Amlie**. Because our Air Force people, our contract management division, after——

Senator **Proxmire**. Are you quite sure it's not peculiar to the Air Force, or the Navy, or the Army, the same policy?

Mr. **Amlie**. They're all the same. Our own people, our Air Force people, went into the plants. After our Secretary, Mr. Orr, was briefed on how bad things were at Hughes, he directed us to find out about other contractors, what they did, were they that bad. So we went to five other contractors and got their dollars per standard hour.

Mr. **Fitzgerald**. They were not as bad as Hughes.

Mr. **Amlie**. Between $150 and $300.

Senator **Proxmire**. Now, Mr. Parfitt, in my opening remarks I mentioned your Pratt & Whitney study. What was the Air Force's reaction to your study and were any remedial steps taken as a result of it?

Mr. **Parfitt**. So far as I know, no, sir, no specific actions were taken purely based on this report or this memorandum of record that I wrote on this Pratt & Whitney bid and some while after I submitted it to our front office it was returned to me with a note from the executive officer then saying: "No longer required by us," and they never really did anything with it. In the interim, a report had been written by a team headed by a retired General Slade who was a United Technologies Corp. consultant which concluded that aerospace contracting in particular and defense contracting generally is a unique thing in our universe. That regardless of what happens to inflation, even if we had deflation in the general economy, there would nevertheless be a continuing 18- to 20-percent inflation in the defense contracting business, as a given fact of life, regardless of all other circumstances. He recommended that they simply increase the budget, bite the bullet, and pay the bill.

Our supervising people in MF in the Air Force, the principal deputy at that time stated to Mr. Fitzgerald that there was no point in messing around with any details; they already adopted the Slade report and they were going down that road—simply get more money.

Senator **Proxmire**. Now, in the opinion of any of the three of you, has the Air Force or the Defense Department taken any useful action to bring these price-markup problems under control in the wake of the spare parts scandal uncovered in recent years? Are the problems being fixed?

Mr. **Fitzgerald**. There have been some improvements on the margin I believe, Senator. Mr. Amlie worked long and hard to promote the idea of getting more competition and I think that's had a modicum of success. But as I say, it's on the margin and in the briefing Mr. Parfitt and I received a few weeks ago the competition advocate people, who are working very hard and trying, have as their objective the improvement of the image of procurement, not necessarily the actuality of lower pricing.

Now we've seen some disturbing examples of instances in which specific little hardware items, such as pliers, the $749 pliers that Mr. Chauhan testified to, were in fact reduced in price, but that the savings were reapplied to the same order, just added more administrative costs. So we are not certain that the good work that some of our competition advocates are doing on the margin are being translated into hard dollar savings. There have been some changes as a result of the scandals, but the essence of the approach that we have described here is unchanged.

In the case of Mr. Parfitt's report, he made the specific recommendation that the basic order agreement with Pratt & Whitney which allowed to reprice years after they delivered in some cases—delivered the project—be abandoned. That was done. I'm not sure if it was the direct result of Mr. Parfitt's report. But instead, we have found or at least found at that time an increase in unpriced purchased orders which are in effect blank checks which are just about as bad as the old basic order agreement.

Senator Proxmire. Are you saying that it is Air Force and Defense Department policy to permit and be aware of excessive costs and, therefore, there's very little, if any incentive on the part of the contractors to lower their costs?

Mr. Fitzgerald. Senator, I suppose that's the way it would translate to a taxpayer, but the procurement community does not define there costs as excessive as long as the contractor can demonstate that he actually spent the money, plans to spend the money, or has some rationalization to back it up on the basis of actual or projected expenditures. That's the part that's crazy—their definition of what's "excessive." I'm using that word advisedly because the term applied by former Assistant Secretary Hale to the notion that whatever the contractors spend, as long it's in the allowable category, it a good price.

Senator Proxmire. Now for paying this amount you'd think there would be extraordinary profits and there may be, but it seems to me your discussion suggests that this comes not only from high profits, but also from very low productivity, and inefficiency, and excessively high overhead. It that right?

Mr. Fitzgerald. Yes, sir.

Senator Proxmire. So it's a matter of, as you say, applying a poverty situation. If they had to struggle and fight every inch of the way to make a profit, they would be much more efficient and the cost would be much lower?

Mr. Fitzgerald. And to stay in business. If they knew there was a hungry competitor around the corner waiting to take it, it would make a difference too.

Senator Proxmire. Can you explain why productivity in the plants is low and whether any of you have personally observed it?

Mr. Fitzgerald. Well, yes, I have observed it personally and all three of us have.

Senator Proxmire. Why is it low?

Mr. Fitzgerald. Because it doesn't matter.

Senator **Proxmire**. What have you observed? Give me a description of a situation—people just standing around and doing nothing?

Mr. **Fitzgerald**. Or absent, or doing the work incorrectly, and getting paid to correct it, and that goes on on a small scale—Mr. Amlie can recite what he's learned about some of the Navy contracts, but that's not new. We are presently paying Lockheed $1½ billion to fix the faulty wings on the C-5A, the ones that they told you 16 years ago were not faulty. So the contractors get paid for bad work.

Senator **Proxmire**. Have you visited the defense plants and observed the situation where work actually isn't being done?

Mr. **Fitzgerald**. Oh, yes; the worker pay is quite low and mostly you just find that they are not there, they are absent is what we observed in counting heads in one of the contractor's plants, and there were a fraction of the people said to be assigned to the various projects just weren't there.

Senator **Proxmire**. Mr. Amlie, did you want to add to that?

Mr. **Amlie**. No.

Mr. **Fitzgerald**. You observed that on one of our visits. You just didn't see the people there.

Mr. **Amlie**. We toured a plant and there were very few people working and, as Mr. Fitzgerald said, there were very few people there, but we had at that time complete records of what we were being charged for man-hours for these various projects.

Senator **Proxmire**. Now, this isn't proprietary. I suppose you can tell me the name of the plant.

Mr. **Amlie**. I shouldn't tell you.

Senator **Proxmire**. Why not?

Mr. **Amlie**. They're all the same.

Senator **Proxmire**. Well, we want documentation when we can get it and if the people aren't there not doing the job I don't see how that's proprietary. I can understand how costing policies and so forth might be proprietary, but if you go to a plant and they're just not doing the job and they're grossly unproductive, I think we ought to know.

Mr. **Fitzgerald**. Well, Senator, I might shed some light on that because it is in the record now. Mr. Parfitt and I on another visit to a plant observed what we thought were highly improper timekeeping actions. You see, one thing that can happen when you're overstuffed and have a permissive budget on one contract and more permissive on another is what's politely called migration of charges. Some folks call it timekeeping fraud. But I don't care whether it's fraudelent or not. We are not really interested in the criminal aspect. We are interested in what we can do administratively to control it. But when we observed what to me were blatant improper actions we reported them to the Defense Department inspector general who in turn had the Defense Audit Agency investigate, and in due course the report came back signed by the chiefs at Defense Contract Audit Agency and endorsed by the Defense Department people up to the Assistant Secretary Comptroller saying there was no problem. Thanks to another Senate committee, we got ahold of the work papers of the auditors who actually investigated that and found they had reported something on the order of 85 percent bad charges. Now this translated into being no problem.

So that's a whole area that needs to be explored. We are unable to do it. I documented this in testimony that I prepared for presentation to the Senate Governmental Affairs Committee on March 1 and the same folks who raised objections to this present testimony succeeded in blocking the clearance of that testimony as an official presentation. So it was never really aired, but we have it documented.

So the highly unreliable timekeeping is a partial explanation I think for some of the really astounding inefficiencies that you see reported.

I have never seen a factory worker at 6 percent efficiency. It would be very tiring to move that slowly. They either don't work at all or they do work poorly. The pace is somewhat relaxed, but it's not as low as 6 percent that we see reported. I suspect timekeeping irregularities in those cases.

Senator **Proxmire**. Congressman Scheuer.

Representative **Scheuer**. Mr. Fitzgerald, is this inefficiency and is this astonishingly low productivity evidence to you or to Mr. Parfitt when you walk through a plant, for example?

Mr. **Fitzgerald**. Yes. It is to me. That was my trade before I was——

Representative **Scheuer**. Does the Defense Department have representatives at these major contracting organizations during the course of the work?

Mr. **Fitzgerald**. Sure.

Representative **Scheuer**. How come these guys don't pick it up?

Mr. **Fitzgerald**. Because they get in trouble if they do and report it. That's the simple, straighforward answer.

Representative **Scheuer**. They get in trouble with the Defense Department if they report what in effect could be characterized as timekeeping fraud?

Mr. **Fitzgerald**. Yes, sir; I think there are ample examples of that, certainly enough to make other taxpayer employees hesitant to do it. Mr. Chauhan who testified before Senator Grassley's committee in June who I referred to previously is in a lot of trouble right now and he's an excellent employee. He finds more examples of opportunities to save money than any engineer that we know of in the field. He's in constant hot water.

Representative **Scheuer**. How does that work?

Mr. **Fitzgerald**. Mr. George Stanton, the former chief of the audit section at Pratt & Whitney in Wast Palm Beach, was just harried out of his job in effect. He's retired now. He did excellent work on other areas, on wages and salary rates, which is another problem we haven't discussed. The rewards and punishment system is just upside down. Mr. Amlie has written an excellent paper on that that's become famous as the Amlie memo, or infamous, depending on your viewpoint.

Representative **Scheuer**. Let me get back to your comment about Lockheed and the $1½ billion that we are paying them to correct the problem with the rings I think you stated—piston rings?

Mr. **Fitzgerald**. Wings. It's wings threaten to fall off, which is disconcerting.

Representative **Scheuer**. As a former Army Air Force pilot, I can say from experience that it would be very disconcerting.

There must be a contract to build those wings or build the aircraft and in that contract don't they have very detailed engineering plans and specifications?

Mr. FITZGERALD. Sure.

Representative SCHEUER. Now if the contract isn't performed to those plans and specifications, isn't it provided some place that the contractor must remedy whatever the problem is?

Mr. FITZGERALD. There was such a provision in the original C-5 contract but we tore that contract up when it became inconvenient for Lockheed with the so-called restructuring of the contract and, at the same time, gave them what amounted to a grant of more than $1 billion of taxpayers' money under Public Law 85-804. Now these are the same folks who will plead that their proprietary data cannot be revealed in public, but you're asked to send money whenever they get in trouble.

Representative SCHEUER. Now when they get into trouble through no fault of their own, maybe they have an equitable case. If something comes up that nobody forsaw in some of these very superduper high tech devices and systems and weapons and so forth, conceivably they could have a case. But when the trouble that they got into was sheerly from their own negligence, I hate to use this world, but from their own incompetence and their lack of productivity, then I don't know why the taxpayers should bail them out. I don't know why, if they can't build something as conventional and something on which they have had as much experience building in the past as the wing of an aircraft, if they can't build that according to plans and specs, I don't see for the life of me why the taxpayers should be called on to bail them out.

It seems to me they ought to bail themselves out, and there's something wrong with the procurement system that leaves out the very simple provision that if you perform in a faulty way you have to remedy that at your own expense. You build a little five-story office building anywhere in Washington, the bank wouldn't provide the mortgage without a party representing him, representing that bank at all times during construction, and if there's something wrong with the construction the general contractor has to go back in there and maybe has to tear out some steel work or concrete work or electric work or whatever it is, and remedy that defect at his own expense.

I don't know why it should be any different in the military procurement.

Mr. FITZGERALD. I don't either, Congressman Scheuer, and we push as hard as we can to make contracts mean something, and the controller of the community in the Pentagon simply has no power. As Mr. Parfitt said, our real function is to pay the bills as ordered by the procurement generals. That's really the only function the controller has in this process.

The Congress I think might give some thought to what happens over years—and we have seen this for at least 20 years now—as a result of constant coddling of these big industrial firms which I believe has resulted in the survival of the least fit and that's what we're reaping the benefit of nowadays. It's had a devastating effect on our ability to buy weapons, among other things, not to mention the effect on the economy.

If you will look at the testimony presented by Mr. Chauhan which I mentioned previously regarding the permissive changing of contracts—and he gave the particular example of the Maverick missile—you will see that a fixed price contract plotted overtime, the value of the contract overtime, looks like a profile of stairs—a series of steps. Each time the cumulative expenditure line approaches the tread, they add another riser and up it goes. It's a completely open ended arrangement in those kinds of situations. It needs to be fixed, but there's no incentive to do so.

Representative **Scheuer**. Thank you, Senator.

Senator **Proxmire**. Can you cite and discuss some examples of how overhead—are we talking about lavish salaries exorbitant for company officers and company cars and aircraft among other things?

Mr. **Fitzgerald**. Yes. I believe they are all in the public record. There are examples from that that came out of the work of Mr. George Stanton at West Palm Beach in Pratt & Whitney and also the work done by the Defense Contract Administration Service on the executive salaries at that same location. Mr. Perfitt is more familiar with Stanton's work on wages and salaries and might want to recite that.

Mr. **Parfitt**. Stanton's review of the rate of increase in overall compensation at Pratt & Whitney at West Palm Beach showed that the increase was ranging around 20 to 25 percent per year at the time when he looked at it in 1982. That was in a year when inflation in June 1982 had receded to a level of about 6.9 or 7 percent and Stanton had found out earlier in March when we talked that the rate of increase in overall compensation at the plant in West Palm Beach was such that if it was extrapolated through the ensuing years to the same rate of increase in the past years it would cost the Government some $150 million unnecessarily in the span of 5 or 6 years and his report was well founded.

First it was held up in the regional headquarters and during the course of processing the report before it ever reached Washington they decided to move Stanton to the west coast suddenly. Six or seven months ahead of the normal earliest rotation date, and that was a move obviously to intimidate him, I feel, and certainly would have a chilling effect on other auditors. If you rock the boat by raising issues of this type you're going to get in trouble. The message was quite clear I think.

Mr. **Fitzgerald**. Mr. Stanton also reported numerous instances of excesses in the furnishing of company cars at taxpayer expense, and of what he alleged was improper entertainment of high ranking Governmnent officials. None of this endeared him to the procurement community and he is, as I say, now retired. And the example has been set for other auditors who in the defense contract audit agency in my review have come to specialize in the fine art of finding no evidence. That's what they do best. And when they do, particularly if it's something highly significant and embarrassing to a politically powerful and influential contractor, they almost invariably get into trouble.

Senator **Proxmire**. Would it help solve the spare part problem if there were more defense auditors on the job?

Mr. **Fitzgerald**. I don't think so, Senator, particularly given their current marching orders, which are to examine the contractor's past and prospective costs in the manner that I have described here to see if there are allowable categories and follow a trend, an established trend of costs.

I think we've got plenty of auditors. I think we have more than enough plant representatives, perhaps too many. At the Hughes plant we talked about where we discussed the problems before, we had approximately 102 Government representatives full-time in residence. None of the problems that have become evident to outsiders were reported by them. So I don't think we need more people. I think we probably need to have a very significant reduction in the current force of people and perhaps rebuild it, but certainly the people we have now are not helping us, by and large. There are notable exceptions to that, of course—Mr. Stanton, Mr. Chauhan, and others—the so-called "closet patriots" who want to do the right things they tell us if they can get away with it.

Senator **Proxmire**. Mr. Amlie.

Mr. **Amlie**. Maybe I could shed some light on do we need more people.

Senator **Proxmire**. I said more Defense auditors.

Mr. **Amlie**. Congressman Scheuer's opening remarks said why and I wanted to try to explain that a little bit. In the Washington metropolitan area there are 200,000 people getting Government money to manage or some would say mismanage defense acquisition. In France, there are 25 people, not 200,000—25 people managing defense acquisition. They do a magnificent job. So it's just too many bureaucrats. We're bureaucrats. The problem is we have 102 people, such as the plant representatives at Hughes.

Senator **Proxmire**. All right. That comes to the last questions I have and I want to ask each of you to respond. Feel as free and easy as you can and say whatever you want to. I know you're the kind of people that do.

What is the solution? What should we do? First, start with Mr. Amlie.

Mr. **Amlie**. Senator, I've been in this business for 32 years and I don't know. I really don't. The rewards and punishment system——

Senator **Proxmire**. Supposing you were Secretary of Defense or President of the United States and had the authority to do whatever you wanted. What would you do?

Mr. **Amlie**. I would try and approach the acquisition process the way the French do. They do a magnificent job.

Senator **Proxmire**. Give us a brief explanation of what they do with 25 people that we can't do with 25,000.

Mr. **Amlie**. 200,000 people. Well, those people are very well trained. They are military officers, but they know they can stay in that job forever. They don't have to retire at the early age of 43. They know if they retire and go to work for a contractor within 5 years they go to jail. That solves the revolving door problem. The motivations are to do a good job and the better you do your job, the more you are rewarded. In our system, it's exactly the opposite.

Senator **Proxmire**. Mr. Parfitt.

Mr. PARFITT. My feeling is that one major step that should be taken, and I think it's feasible to do it, is where we have a negotiated contract because we can't have the comeptition, is negotiate a fixed overhead rate for the life of the contact so that the contractor can't increase his costs and his profit. If you had a fixed overhead on a man's operation, then give him that fixed overhead rate. If he can in fact get his overhead costs down, which is quite possible in most cases, he would make more profit. So I think you have an incentive if you had a fixed overhead rate and you could not increase it.

Senator PROXMIRE. Under present circumstances, the higher his overhead, the higher the profit.

Mr. PARFITT. Yes. If you look at illustration one, it's important. The basic rate was $13.93 and it rounds out to $99.13 but call it $100. His minimum profit there is 6 percent. Suppose he can allow his overhead and other costs to drift upward by 100-plus so it's 200 and not negotiate more costs. Now he gets $200 from us on the next round of negotiations 3 years down the road but he gets $12 profit at the very lowest.

Senator PROXMIRE. So the more entertainment he engages in, the more jets he has, the more limousines and so forth, the higher his profits.

Mr. PARFITT. And the more Washington offices here, it's all coming back. They're got the goose that lays the golden egg. They let the costs go up and they make more profit.

Senator PROXMIRE. Mr. Fitzgerald.

Mr. FITGERALD. That's the basic flaw in this approach and all of these things I think are examples of the upsidedown rewards and punishment system which in turn flow from bad policies and bad motivations I suppose. I think there are numerous mechanical changes, procedural changes, that could and should be made. You recall, Senator, that in May 1969, following the first round of people such as I, setting our hair afire. your committee, the full Joint Economic Committee, issued an excellent report which I think had unanimous support of both Houses and both parties, enumerating a whole list of procedural changes that should be made. Those are still valid. Those are still good procedural changes, but in the absence of the intent to make them work, they don't work. We have seen the should cost approach which I have advocated and I and my associates were responsible for developing in the early 1960's. We have seen it transformed into a kind of whitewash in some cases because of bad intentions. So I think you've got to fix the rewards and punishment system. There's got to be a way to reward those people who save money, or try to, and to punish those who do not. That includes contractors as well as government employees.

Senator PROXMIRE. Let met conclude by making this statement. The testimony we heard today is distressing both for what was said and what the Air Force ordered to be unsaid. The price markups described by the witnesses appear to me to be excessive and outrageous and if the ones presented to us are correct these excessive markups are not exceptional or infrequent; they are widespread and pervasive.

In my opening remarks I name the contractors whose pricing practices and markups were analyzed and I intend to invite them to testify in this series of hearings to present their side of the story.

I want to especially commend the witnesses today—Ernest Fitzgerald, Colin Parfitt, and Tom Amlie—for their unique brand of courage and persistence on behalf of the taxpayer. They certainly all deserve medals in recognition. You're not going to get that kind of praise and recognition from your superiors I'm afraid, but you're used to hot water and you seem to thrive in it. I hope you will thrive for many years to come. It certainly would benefit the country. We are deeply indebted to you gentleman for being candid and forthright in your responses and mostly for the good work you're doing in the Air Force. I have heard testimony in the past from Mr. Fitzgerald appearing by himself. Today there are three of you and I understand you gentlemen work together and I hope that is the beginning of a trend.

For tomorrow's hearing we have invited William Taft, Deputy Secretary of Defense. Secretary Taft has indicated his unwillingness to testify and will not appear. We will hear testimony, however, from the deputy—we may hear testimony from a deputy or we may decide to wait until Mr. Taft changes his mind. We will hear testimony from the General Accounting Office to discuss a new report on defense productions and from the National Tooling and Machining Association, a small business group.

I thank you gentleman very, very much.

Representative Scheuer.

Representative **Scheuer**. I want to express my appreciation too, as Senator Proxmire did, for your candor and your forthright and highly intelligent testimony.

This is the first time I have had the pleasure and privilege for meeting you two gentlemen. I've known Mr. Fitzgerald for the last decade and a half and he deserves to be labeled an honorary Senator or Congressman in that he is, without doubt, one of the world's great survivors. Mr. Fitzgerald, you have given of yourself, you have shown courage and guts beyond the call of duty, and I congratulate you and I salute you and I look forward to working with you on this current set of hearings.

Thank you, Senator.

Senator **Proxmire**. The subcommittee stands in recess.

[Whereupon, at 11:25 a.m., the subcommittee recessed, to reconvene at 10 a.m., Thursday, October 11, 1984.]

DEFENSE ECONOMICS ISSUES

THURSDAY, OCTOBER 11, 1984

Congress of the United States,
Subcommittee on International Trade,
Finance, and Security Economics
of the Joint Economic Committee,
Washington, DC.

The subcommittee met, pursuant to recess, at 10 a.m., in room SD-562, Dirksen Senate Office Building, Hon. William Proxmire (vice chairman of the subcommittee) presiding.

Present: Senator Proxmire and Representative Scheuer.

Also present: James K. Galbraith, deputy director; and Richard F Kaufman, general counsel.

OPENING STATEMENT OF SENATOR PROXMIRE, VICE CHAIRMAN

Senator **Proxmire**. The subcommittee will come to order.

Yesterday we received official Air Force testimony from A. Ernest Fitzgerald and others about excessive markups on military spare parts. We had asked the Air Force to look at the price practices of 6 of the largest 10 defense contractors and the results confirm suspicions about what has been revealed about the way the military purchases its hammers and coffee makers is also true about the way it buys all spare parts for weapons.

Furthermore, the problem we are told extends to entire weapons. The reason appears to be that we have a cost-based system of negotiating defense contracts. The Defense Department agrees to reimburse contractors on the basis of their costs plus a profit. The higher the cost, the higher the profit. It's all perfectly legal in the topsy-turvy world of defense contracting.

Contractors and their apologists in the Pentagon can thus assert that they are complying with the regulations and the terms of their contracts.

But what is wrong, we are coming to realize, is that the system rewards high costs and punishes cost cutters.

Today, we hope to throw additional light on this problem. We will hear from Bruce Hahn, representing the National Tooling & Machining Association, an organization of small manufacturers; Eleanor Chelimsky, from the General Accounting Office; and John L. Kendig, from the Department of Defense.

In the interest of time, I'm asking the speakers to limit their opening remarks to 10 minutes and I suggest you use your time to summarize your prepared statements. Of course, the entire statement will be printed in the record and I will give you a little warning when you have a minute to go.

Mr. Hahn will speak first and I must say, Mr. Hahn, without intending to steal your thunder, that the figures you give of about $30 to $50 in standard hour labor cost is really excellent news for the taxpayer—at least potential news for the taxpayer. It's in embarrassingly sharp contrast with the figures we received yesterday. You're saying that your members can do the work for a fraction of what the large defense contractors charge the Government. I will be most interested in hearing why this is possible and then hearing the Defense Department's response.

Mr. Hahn, why don't you go ahead.

STATEMENT OF BRUCE N. HAHN, MANAGER OF GOVERNMENT AFFAIRS AND PUBLIC RELATIONS, NATIONAL TOOLING & MACHINING ASSOCIATION

Mr. HAHN. Thank you very much, Senator.

Our members are basically small businessmen. There's an estimated 14,000 of them in the United States. They own small contract tooling and machining companies which to the uninitiated might be simplified by saying a machine shop. Most of them came up through the ranks. Typically, they start their own business in a garage and go from there, typically have 15 to 25 employees. Their normal way of doing business is to bid competitively on contracts. Therefore, the prices that we have obtained through our survey range from $32 to just over $52 and some charge per hour are prices that result by virtue of competition in the marketplace.

The reason that you have different prices in the Federal marketplace and the Department of Defense procurement is you don't have competition. You can talk about fixed price contracts, cost reimbursement contracts; you can talk about administrative contracting officer, contract auditors, price analysts, and you can go on and on. You get to the bottom line and perhaps build a very rational excuse as to why that part or that standard hour is $130 or whatever an hour.

The fact of the matter is, there's really only two ways to look at contracts. There are contracts that are competitive and there are contracts that are not competitive. If you take a noncompetitive contract, a sole source contract, and open it up to competition, all those factors go out the door, all of them, the individuals that affect the process—it's simply a matter of who can produce the product at the least price.

There have been experiments to see what would happen if they would switch a sole source contract for open competition for military spare parts. Some years ago, I think about 3 years ago, the Small Business Administration as an experiment pursuaded the DOD to do just that. They took I believe 170 or 190 sole source contracts for spare parts and they put them out competitively. The savings were 40 percent. GAO did a followup. GAO said your numbers were probably low because many of those parts hadn't been purchased for several years, so maybe the savings would have been around 50 percent.

What does that mean in terms of the expenditures of the Department of Defense? Well, DOD buys $22 billion of spare parts every year. DOD used open competition—and by that, I mean sealed bids, formally advertised—about 5.5 percent of the time. They claim that the spare parts procurements are used competitively about 20 percent of the time.

If you take the latter figure and say 80 percent of this $22 billion is not procured competitively, that's probably about $16 billion. If the savings in the SBA survey held true, the potential is about $8 billion in savings per year simply by going to a competitive process.

I believe that the subcommittee is on the right track in one sense in taking a look at the contract administration procedures, but I would urge you also to look even more closely at means to increase competition. When you have only 20 percent procured competitively, you are losing on 80 percent of your parts the absolute best guarantee that you can ever possibly have, and that's free and open competition. Thank you, sir.

[The prepared statement of Mr. Hahn follows:]

PREPARED STATEMENT OF BRUCE N. HAHN

Mr. Chairman and Members of the Committee. My name is Bruce Hahn and I am the Manager of Government Affairs and Public Relations for the National Tooling and Machining Association. Our industry is composed of approximately 14,000 contract metalworking companies, most of them small, averaging 15-25 employees, who constitute this country's means of production.

This industry is at the apex of the manufacturing process. The skilled journeymen in this industry provide the tooling, including tools, dies, fixtures, molds and precision machined parts which enable the mass production of virtually every product in an industrialized society. They use from the simplest lathe to the most highly complex computer aided design/computer aided manufacturing (CAD/CAM) equipment capable of tolerances of 1/10,000 of an inch.

We estimate that at least 60% of our 3,500 member companies have produced spare and original equipment parts for our military. Those parts range from the simplest to the most complex and critical jet engine parts. By a large margin most of these parts are supplied indirectly, with our members serving as subcontractors to original equipment manufacturers. The main reason for this is that the service branches refuse to allow small businesses to compete for spare parts procurements. The barriers to competition range from management inefficiency to restrictive procurement regulations. Many of the latter seem to have no rational basis and are based on extremely flawed assumptions and procedures.

At the request of this committee we devised a survey which would reveal some data about pricing in our industry. The survey data was collected at our 1984 Fall Conference, October 1-4, most of it during a quality control seminar. It is our understanding that the request was based on the committees desire to investigate potential savings that might exist in the acquisition of parts for the military.

A copy of the questionnaire is attached. We described in broad terms the type of work to be performed and asked our members to quote standard hourly rates, with overhead broken out where possible, for three common and frequently used machining operations. In the relatively few cases where respondents quoted overhead separately, we added it back to determine the net hourly rate for each operation. Thus the hourly rates are inclusive and the overhead should be subtracted to determine hourly rates less overhead.

The survey was based on 38 responses. While the time available between the data tabulation precluded computation of reliability indicators, we believe that the application of scientific reliability measurements would indicate that these numbers will be within ± 5 or 10% of the true actual rates.

The average rate, including overhead, for complex machining center work was $50.60 per hour. For NC (numerical control) or CNC (computerized numerical control) the rate was $44.17. For conventional vertical milling the rate was $32.06. The average combined rate for all three operations was $42.30 per hour. Each of these rates would be the equivalent of a standard hourly rate. For those figuring overhead on a percentage basis the rate averaged 107.3%. For those using a dollar basis the rate was $16.85. We believe that the discrepancy between the rate yielded by applying the percentage overhead to the total and comparing it to the overhead rates quoted in dollars was due to two factors. First, since relatively few of the respondents regularly broke out overhead either on a percentage or actual dollar rate, the sample size for these two responses was small and certainly subject to significant statistical error. Secondly there may be inherent differences in the application of a percentage overhead versus an actual dollar overhead which might lead to a difference in the two even with a larger sample size.

These rates might seem high to someone unfamiliar with the nature of the industry. First of all the skilled workers in the tooling and machining industry are among the highest skilled, and consequently the highest paid in the country. The requirements of the job, which include significant intuitive mathematical and mechanical aptitudes, mean that a relatively small portion of the potential workforce has the potential for a career in this industry. The supply and demand equation is such that a good journeyman, after completing a four year apprenticeship, can easily earn $30,000 - 35,000 per year. The cost of training is very high. In addition, the industry is extremely capital intensive. A sophisticated machining center can cost a half-a-million dollars and the cost of money at today's interest rates therefore adds significantly to the cost of production. Even at the rates generated by the survey the intense competition among the 14,000 companies in the industry keeps profits low, generally in the 5-6% range according to recent industry surveys.

The rates generally charged by our industry are typically well below the rates charged the government by large prime contractors for spare parts work. The reason for this is that the federal government rarely uses open competition in procurement and, as a result there is no incentive for a sole source supplier to control costs. If anything there is an incentive to raise costs, inasmuch as profits are normally proportionate to costs.

While many of our members produce spare parts for military systems, most do so as subcontractors, providing competitive bids on parts to a prime contractor in the same manner that they might bid competitively to another customer. In most cases this is the only way they can product these parts because the service branches have either determined that the production of the part requires special skills existing only with the original equipment manufacturer, or the data packages are missing, illegible, or incomplete or the data is claimed to be proprietary.

It is clear that our current spare parts procurement process has broken down. Military spare parts purchases amount to some $22 billion per year. Only several months ago it was claimed to be $12 billion per year. As best we can tell the change is not a result of a sudden effort to increase spare parts procurements but a matter of simply getting a more accurate handle on the amount being spent. By the same token there is much confusion over the portion of spare parts procured competitively with Defense Department estimates running as high as 20% and figures we've seen at around 5%.

Congress last week passed landmark legislation intended to increase competition in spare parts procurement. The effect of the legislation will hinge on the rulemaking process and the willingness and ability of procurement personnel to use more competition in procurement. Several things are certain:

1.) "Pure" competition guarantees the lowest price. (By "pure" we exclude "negotiated" type procurements where a limited number of companies each get a proportion of the business.)

2.) Competition is the simplest, easiest, most cost effective means of preventing unfair profits. You don't need such things as the Renegotiation Board on the Vinson Trammel Act in cases where there is open competition.

3.) The share of "pure" competition is quantifiable. As long as the percentage increases you can be sure that you are getting the best price on an increasing portion of spare parts purchases. When that number levels off you can be sure that additional measures will be necessary to attain further savings.

We therefore recommend that this committee closely watch the process to see how quickly and to what level competition in spare parts procurements increases. While there are two or more companies who are capably of making 99% of military spare parts, this is not a realistic target. First of all some of the data which is claimed to be proprietary actually is. It will take plenty of time to go back and review the large amount of data with this classification which has never received serious review. There are also other barriers which will take time to address. The vast amounts of blueprints which have been lost, have portions missing, or which are illegible will take time to reconstruct. It will take time to build a data base which can assist competitive reprocurements. Many of our members tell us that there is a need to improve the skills of service branch buyers in terms of understanding how parts are made and what equipment is required to make them. Both reeducation of existing procurement personnel and a sharpening of job descriptions for new hires is call for.

Nevertheless, much progress can be made if the will and determination are there. Perhaps 10-20% of the existing spare parts purchases could be converted to competitive procurements each year until about 50-60% of all spare parts purchases were purchased through open competition. However, if you accept 5% as a target instead of 10-20% you'll get 2 1/2% that first year and then very little the next.

The key will be the determination of this committee and other members of Congress to stimulate continued action at the Department of Defense. We in the private sector have a similar responsibility and we can promise that we will continue similar efforts.

Thank you very much.

NATIONAL TOOLING &
MACHINING ASSOCIATION

9300 LIVINGSTON ROAD, FT. WASHINGTON, MD 20744 301/248-6200

WE NEED YOUR HELP

We have received a request from the Joint Economic Committee of the U.S. Congress to help them in their study of standard hourly rates charged on Department of Defense projects. Such a study could benefit NTMA members because a favorable comparison would support our arguments that competition in spare parts procurement would not only mean more business for our industry, but would also mean reduced costs to the government. (Many of the largest prime contractors in the U.S. have standard hourly rates well in excess of $100.00 per hour.)

The committee has requested that we provide them statistics on shop rates based on an anonymous sampling of members. These figures would be averaged and the averages provided to the committee. Even though this questionnaire is anonymous, no individual questionnaires would be released to any NTMA member. And, although ours is a very competitive industry, our attorneys advise us not to distribute even the averages because of antitrust considerations.

The work in question relates to military aircraft, which means that much of it would be aluminum and that it might range widely in terms of size, complexity and tolerances. Military specifications and/or standards would have to be met. Please answer the questions below, then fold the questionnaire and insert it into the questionnaire box.

- -

What is the hourly rate you charge to customers, exclusive of overhead, for (list all that apply):

a.) complex machining center work $____________

b.) NC or CNC turning of aluminum parts $____________

c.) Conventional vertical milling machine work $____________

Do you charge an overhead rate, either as a percentage or as a flat rate?

____________%

$____________

Senator **Proxmire**. Thank you very much, Mr. Hahn.

Our next witness representing the General Accounting Office is Mrs. Chelimsky. Mrs. Chelimsky, we are delighted to have you. Go right ahead.

STATEMENT OF ELEANOR CHELIMSKY, DIRECTOR, PROGRAM EVALUATION AND METHODOLOGY DIVISION, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY KWAI CHAN, JAMES SOLOMON, AND DAVID SOLENBERGER, OPERATIONS RESEARCH ANALYSTS

Mrs. **Chelimsky**. Thank you. We are very happy to be here to talk about the evaluation that we did on production capabilities and constraints in the defense industrial base. I have some people here from GAO who worked on the study and if I introduce them can I have my 30 seconds back later to add to the end of the ten minutes?

Mr. Kwai Chan, who directed the study; Mr. James Solomon who was project manager of the study; David Solenberger who also worked on the study. All of them are basically operations research analysts. We have one engineer in the group, however.

Well, I am presenting an abbreviated statement and hope to get it done in the 10 minutes and 30 seconds.

As you know, our evaluation focused on the defense industrial base which consists of private firms and several contracting levels or tiers and government facilities that produce weapon systems and other items for the Defense Department. It comprises some 25,000 to 30,000 prime contractors and some 50,000 subcontractors.

Your subcommittee asked us to look at three issues. First, whether or not there's evidence that various problems and constraints said to exist in the defense industrial base do in fact exist. Second, whether or not these problems are likely to affect the defense industrial base's ability to meet projected defense requirements. And finally, whether we as a Nation are adequately monitoring the production problems and whether data and evaluation systems are in place that would allow such monitoring.

I wanted to talk to you a little bit about our methodology, but I'm afraid it's going to be too long. Let me just say that we define critical items as follows: Items with long or growing intervals between procurement and delivery, having high or increasing unit costs, few suppliers, foreign sources, or a history of production problems. That's important for understanding the study.

We used a case study design in order to develop the kind of in-depth understanding of the defense industrial base's structure and substructure that only a case study can provide.

We selected six weapon systems, distributed two each among the three services. They were chosen from among those the Department of Defense itself considers its highest priorities. The six weapon systems we examined were the Navy's AIM-54 Phoenix missile, the Army's M-1 Abrams tank, the Army's TOW-2 missile, the Navy's Harpoon missile, the Air Force's F-100 turbofan engine which powers the F-15 Eagle and the F-16 Falcon aircraft, and the Air Force's Global Positioning System which is a satellite-based communication system—all clearly high priority systems.

To collect our information on these systems, we visited 5 prime contractors and 34 subcontractors, that's 39 in all, using a questionnaire and conducting interviews.

Now the findings. First, the answer to the first question—what evidence did we see that the problems and constraints that we have heard about so much do in fact exist? Our findings do generally support those cited in previous studies which suggested that the defense industrial base was undergoing serious problems, especially in the lower tiers.

Although our findings are not generalizable to the industrial base as a whole, they reinforce the evidence of the earlier studies and they clearly demonstrate the existence of problems in high priority systems. We have six major findings.

First, we discovered an upper limit constraint for production, on four of the six weapon systems that we studied, caused by shortages of production machinery. Although no late deliveries actually occurred during our study period, even slightly increased demand could have caused significant time delays and may still do so in the future, given a changing economic context. In the case of the TOW-2 missile, for example, meeting surge production levels would require additional foreign-built machines involving substantial production leadtimes on the order of 22 months.

Second, we found that shortages of special testing equipment were surprisingly widespread. Many of the contractors we visited were running their testing equipment 24 hours a day to support one or two 8-hour production shifts. At the time of our review, one subtler producer for the Phoenix missile found its testing equipment so limited that it had to ship its own items to another contractor for testing.

Third, we found that shortages of components and raw materials constrained production, especially on the M-1 tank, where final assembly required slaving. Slaving is an expensive practice in which new tanks are built around components borrowed from finished tanks or from stock to avoid a total halt of production.

The fourth finding, reliance on foreign sources, is potentially a serious problem. We found that many components use materials for which 50 percent or more of the national requirement must be imported. For example, a third-tier producer of components for the F-100 engine requires cobalt, graphite, and manganese. While stockpiling eases the raw material problem somewhat, there is also great dependency upon components built abroad. In particular, foreign dependency for semiconductor and microelectronic parts is estimated to be high, but no one knows exactly how high.

Fifth, we found that shortages of skilled labor did not appear to be a major problem during the period of our study, especially for subcontractors in areas of relatively high unemployment. That's not too surprising. On the other hand, we did find an age problem—many skilled machinists employed by the contractors we visited, for example, are aged 50 or over. The time required to train younger replacements may ultimately pose a problem, especially in a stronger economy where increased commercial production draws from the same skilled labor pool as defense.

Finally, an extremely important problem, we found that widespread use of prospriety processes to produce defense components limits the number of manufacturers available to produce a given item and drives up component costs. Of 39 contractors we visited, 25 used proprietary processes.

So in answer to the first question, yes, we did find evidence of all the problems, except for the shortage of skilled labor.

The second question was, how likely are these problems to affect the defense industrial base's ability to meet projected defense requirements?

Here, we compared our information against what defense is planning to do over the outyear period and we think production is likely to be affected by the problems we found.

First, the Phoenix missile. After some early design and testing problems, a projected quadrupling of Phoenix production over the next 5 years may well cause competition between Phoenix and other Hughes-built missiles. Production quality problems noted by the Navy and the subsequent suspension of Phoenix production add additional uncertainty. Indeed, this situation requires very close monitoring.

With regard to the M-1 tank, production now meets current defense requirements, and these levels can be maintained; however, there is concern about the M-1's foreign source dependency, the continued practice of parts slaving, and about the possibility that competing demands in a recovering economy could siphon away skilled labor and material. Again, a close watch is needed.

The TOW-2 missile should be able to meet projected demand, although subcontractors that build components for Hellfire missiles and commercial semiconductor markets could begin to feel the constraint of competing demands. Here again, any final judgment awaits resolution of the production quality problems at the Hughes plant.

The Harpoon missile is maintaining present demand, and we see no problem if demand does not increase, but the situation could change if foreign sales were to increase.

With regard to the F-100 engine, production is meeting present requirements, but the ability to produce it in increased numbers is unpredictable now, with a second prime contractor scheduled to begin F-100 production.

The third question was, are we as a nation adequately monitoring the production problems existing in the defense industrial base and are there data and evaluation systems in place that would allow such monitoring?

Here, we think the answer is clearly, no. The preparedness planning data needed to analyze individual weapon systems is supplied through DOD form 1519. Using this form, the services ask defense contractors and subcontractors whether they can supply certain items and request production data about those items, but completing form 1519 is voluntary and the contractors are not specifically reimbursed for providing the information. We identified a lot of criticism of the data collected for implementation of form 1519, finding near unanimity that the data were inadequate. In fact, we ourselves testified on the subject 3 years ago and talked about the problem of selection of the items that need to have information collected about them in determining the total information requirements for these items. That is, it's not clear that the most essential items are being planned or that the quantity planned for are correct.

Second, the data provided by prime contractors on form 1519 are problematic, frequently being based on unrealistic assumptions and lacking important input from key subcontractors. This is, therefore, a serious information gap and it caused the Air Force to state in its fiscal year 1983 production base analysis that its efforts had been hampered by the absence of reliable data for defining problems and analyzing alternative solutions.

It's true that DOD is now paying greater attention to industrial preparedness planning and, by the same token, lessening its reliance on form 1519. The Army, Navy, and Air Force have increased their funding for such planning and DOD has already begun several initiatives.

Naturally, we commend these efforts, although we find progress has been slower than might have been expected.

More importantly, we think these current DOD initiatives don't adequately address the problems of identifying constraints in the defense industrial base. For example, additional verification of data provided by the contractors is crucial. DOD's way of collecting data and analyzing the subcontractors' capabilities require improvement.

And finally, better methods are needed for screening the very large number of weapon systems components and materials which are of continuing national importance. An improvement in this area will give DOD a better ability, first, to focus rapidly on specific items like the cost production problems and, second, to better prioritize and sequence any remedial actions that need to be taken.

Our evaluation has provided information of two kinds; information that had been unavailable before our review, and information about problems in the defense industrial base which were well known but about which little has been done.

An example of the first kind of information is our identification of a subcontractor's total dependence on foreign sources for glass optics. When we questioned the involved service, we discovered they had been unaware of this fact.

As an example of the second type of information, one component of the gunner's primary sight of the M-1 tank, "slaved" since production of the very first tank, was still being slaved at the time of our visit to General Dynamics. The problem had not been ameliorated over the 5-year period; instead, two additional components, produced by the same contractor, have also required "workaround" to meet production needs.

Senator, it seems to us that these two types of problems call for different responses. Where we provided important information that had been unavailable before the present review, that indicated the inadequacy of the DOD data and monitoring systems for supporting industrial preparedness planning and indicated as well that these data and monitoring systems need to be improved. Where information was known but no action was taken, the need is not for monitoring systems but, instead, for DOD to improve its response to industrial base problems.

Senator PROXMIRE. You have 1 minute to go.

Mrs. **Chelimsky**. I'll make it. To conclude, we believe there are several areas in which progress can be made by DOD in monitoring and addressing problems in the defense industrial base.

These areas are, first, ensuring that the systems and components selected for industrial preparedness planning are the most essential ones. Second, developing the important information on subtier production capabilities that is now lacking, including, for example, consistent information on subcontractor's physical plant capacity, number of employees, foreign sources of components and raw materials. There is a very long list of what is not being collected and what needs to be collected.

The third area involves establishing a data base that identifies past trends and production problems.

Fourth, improving accuracy and verification procedures. We encountered instances of prime contractors providing data to us on subcomponents that differ substantially from the data provided on the same subcomponents by the subtier producers.

Finally, responding more quickly and effectively to identify problems.

We are concerned about the evidence we found that DOD and the services have been aware of serious problems in the defense industrial base but haven't done much to resolve them. Yet, some of the production problems are long standing and the difficulties encountered by subcontractors and producers of components that the prime contractors need for assembling major weapon systems are well known. We think something needs to be done about that.

That concludes my statement, Senator. I think I made it in the time limit.

[The prepared statement of Mrs. Chelimsky follows:]

PREPARED STATEMENT OF ELEANOR CHELIMSKY

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

We are pleased to be here today to testify on defense production, specifically, on the adequacy of information available to the Department of Defense (DOD) about the production capabilities of the defense industrial base (DIB). The DIB consists of private firms at several contracting levels or tiers and government facilities that produce weapon systems and other items for DOD. It comprises some 25,000 to 30,000 prime contractors and some 50,000 subcontractors.

The information we will present is extracted from a draft report the General Accounting Office--GAO--prepared in response to a request from your Subcommittee on International Trade, Finance, and Security Economics, in which we were asked to examine the ability of the DIB to meet projected defense requirements. We were to explore the reasons for DIB production delays, problems of quality, and cost or price increases. Also, if necessary, we were to develop a methodology for examining these issues and DOD's mechanisms for addressing them. Other studies have suggested that most major DIB constraints exist in the lower contracting tiers of the DIB structure; however, there was insufficient information available on the DIB substructure to allow a comprehensive or detailed assessment of the ability of the DIB to meet production requirements. We concluded, therefore, that we needed to develop an improved method for assessing the overall DIB capability and for clarifying subcontracting problems. We applied the method we developed to six case studies.

Concern about the ability of the industrial base to meet defense requirements is not new. Many studies we reviewed, including records of several previous hearings before this Committee, suggest that the DIB has been experiencing serious problems in several areas:

- a lack of skilled labor,
- shortages of production and testing equipment,
- shortages of or delays in receiving components produced by subcontractors,
- long leadtimes,
- high levels of foreign dependency, and
- the fact that many processes are proprietary to the contractors.

These problems have limited DOD's flexibility to adjust to changing requirements. But concerns today are exacerbated by the prospect of defense spending totaling some $1.7 trillion over the next five years, by possible demand-supply perturbations caused by an improving economy, and by the transition from a defense policy envisaging a short-duration scenario of war to scenarios in which probable conflicts are of indefinite duration anywhere in the world.

CURRENT DOD ASSESSMENT METHODS

To fulfill the Committee's request, we first examined how DOD monitored the operation of the DIB and what data were compiled. We found that DOD bases its current methods of assessing the DIB's ability to produce what the services need for defense on either aggregate or system specific data.

Aggregate data are useful to policy makers for identifying and tracking overall trends. Generally, the aggregate data have been produced from models or studies of industrial sectors. For example, the Defense Economic Impact Modeling System (DEIMS), a multi-sectoral input-output econometric model, predicts which industrial sectors are likely to receive more defense funds and the likely effect of these funds on those sectors. DEIMS thus reports on the economy as a whole, rather than on specific weapon systems.

Industrial preparedness planners and program managers, however, not only need data that are aggregate in nature, they also need data that are specific to individual weapon systems. DOD's major means of obtaining this type of data is its Form 1519. Using this form, the services ask defense contractors and subcontractors whether they can supply certain items and request production data about those items. Completing Form 1519 is voluntary, and the contractors are not directly reimbursed for providing the information.

GAO did not fully analyze the issue of the accuracy of the DD 1519 data. However, we identified extensive criticism of the data collected through implementation of the DD 1519 Form. While some service personnel called the data satisfactory (for example, officials at the Army Armament Command believe strongly that the data on ammunition production are sufficiently accurate), elsewhere, we found near unanimity among contractors, weapon system program managers, and authors of previous studies that the data were inadequate. Three years ago, GAO testified before the

Subcommittee on Defense of the House Committee on Appropriations on DOD's industrial planninng process, as typified by information collected on the DD 1519 Form. At that time we felt, as we do today, that problems exist in the selection of the items to analyze and in the determination of total requirements for these items. Consequently, there is no assurance that the most essential items are being planned or that quantities planned for are correct. Overall, the data provided were generally problematic frequently being based on unrealistic assumptions and lacking important input from key subcontractors. This serious information gap caused the Air Force to state (in its fiscal year 1983 production base analysis) that its efforts had been hampered by the absence of reliable data for defining problems and analyzing alternative solutions.

RECENT DOD INITIATIVES

Concerned about the DIB's ability to meet national defense needs, DOD is now paying greater attention to industrial preparedness planning and, by the same token, is lessening its reliance on DD Form 1519. The Army, Navy, and Air Force have increased their funding for industrial preparedness planning and anticipate further increases. DOD has already begun several initiatives including DOD's Task Force to Improve Industrial Responsiveness, the Integrated Industrial Data Management System, a mutual effort of the Air Force and industry representatives called Blueprint for Tomorrow, and the Army System for Automation of Preparedness Planning.

We commend these efforts, of course, but find that progress has been slow. More importantly, we believe that these current DOD initiatives do not adequately address certain of the problems of identifying or removing constraints in the DIB. For example, current initiatives do not ensure verification of data provided by contractors. DOD's ways of collecting data and analyzing subcontractors' capabilities still require improvement. Further, better methods are needed for screening the very large number of weapon system components and materials of continuing national importance: this would give DOD the ability to focus rapidly on those specific items likely to cause on-going and future production problems.

GAO'S ASSESSMENT METHOD

After considering several ways of examining the overall capabilities of the DIB, we settled on a method that reflects the form of the system it is intended to probe. In the DIB, cascading levels of suppliers set up tiers of primary and subsidiary contractors. Each tier might be subject to production constraints which might curtail production. We developed a method which traces production down through the tiers of contractors and within each tier to identify competition for existing resources across contractors or within individual contractors' plants.

GAO decided on a method involving both vertical and horizontal analysis. We applied the vertical analysis to identify and follow critical items for an individual weapon system down through the tiers of suppliers. At each level, possible production constraints were evaluated. The horizontal analysis evaluated the competition for production resources within each firm. Finally a future production analysis compared the results to DOD out-year requirement estimates. This combination of analyses, GAO believes, provides a more comprehensive view of the state and capabilities of the DIB than has been available thus far.

We define critical items as those:

- with long or growing intervals between procurement and delivery,
- high or increasing unit costs,
- few suppliers,
- foreign sources, or
- a history of production problems.

Again, to identify critical items, GAO traces subsystems, components, and raw materials of the weapon system vertically from the prime contractor through the lower tiers of subcontractors. The analysis continues until all critical items are uncovered or further downward analysis seems unwarranted. Throughout this process, each critical item can be evaluated for potential production constraints; if none is encountered, there is no immediate reason for concern.

APPLICATION OF THE GAO METHOD

To determine the feasibility and usefulness of this method, GAO applied it to six high-priority weapon systems currently in production, looking at two cases from each of the three services. To collect information, we visited five prime contractors and 34 subcontractors, utilizing a questionnaire and conducting semi-structured interviews on strengths and weaknesses in production capability. The six weapon systems we examined and their prime contractors were

(1) AIM-54 Phoenix missile--Operational with the Navy since 1974 as the primary fleet defense long-range armament for the F-14 Tomcat (Hughes Aircraft Company);

(2) M1 Abrams tank--The Army's main battle tank for the 1980s and 1990s and its most expensive weapon system acquisition (General Dynamics Land Systems);

(3) TOW2 (tube-launched, optically tracked, wire-guided) missile--The Army's heavy assault weapon against armor and fortifications (Hughes Aircraft Company);

(4) Harpoon missile--The Navy's main anti-ship missile through the 1990s (McDonnell Douglas);

(5) F100 turbofan engine--Used by the Air Force in the F-15 Eagle and F-16 Falcon fighters (Pratt & Whitney Aircraft Group of United Technologies Corporation); and

(6) Global Positioning System--An Air Force satellite-based system designed to provide accurate and continuous positioning information world-wide in any weather and despite countermeasures; also provides information on nuclear detonations (Rockwell International).

GAO'S FINDINGS

Application of the GAO method to the six case studies provided information relevant to many of the DIB production constraints cited in previous studies. While not generalizable to the DIB in general, these findings provide evidence that the problems do exist. Our analyses showed that:

- Shortages of production machinery presented an upper limit constraint for production on four of the six weapon systems; although no late deliveries actually occurred, even slightly increased demand could have caused significant time delays and may still do so in the future given a changing economic context. In the TOW2 case study, meeting surge production levels would require additional foreign machines involving substantial production lead times.
- Shortages of special testing equipment were surprisingly widespread. Many of the contractors visited by GAO were running their testing equipment 24 hours a day to support one or two 8-hour production shifts. At the time of our review a subtier producer for the Phoenix missile found its testing equipment so limited that it had to ship its own items to another contractor for testing.
- Shortages of components and raw materials constrained production, especially on the M1 tank, where final assembly requires "slaving," an expensive practice in which new tanks are built around components borrowed from finished tanks or from stock, to avoid a total halt of production.

- Reliance on foreign sources is potentially a serious production constraint in the DIB. Many components use materials for which 50 percent or more of the national requirement must be imported. For example, a third-tier producer of components for the F100 engine, requires cobalt, graphite, and manganese. While stockpiling eases the raw material problem somewhat, there is also great dependency upon components built abroad. In particular, foreign dependency for semiconductor and microelectronic parts is estimated to be high, but no one knows exactly how high.
- Shortages of skilled labor do not appear to be a major problem at present, especially for subcontractors in areas of relatively high unemployment. There is, however, an age problem--most skilled machinists, for example, are aged 50 or over. Time required to train younger replacements may ultimately pose a problem, especially in a stronger economy where increased commercial production draws from the same skilled labor pool.
- Extensive queue time (queue time is the interval between ordering and first production) did not appear to be a significant constraint for many of the contractors GAO visited, but was used at some contractors' plants as a way of smoothing peaks and valleys in demand.

- Widespread use of proprietary processes to produce defense components limits the number of manufacturers available to produce a given item and drives up component costs. Of 39 contractors visited by GAO, 25 used processes they owned.

Combining the information from vertical and horizontal analyses with projected defense requirements, GAO assessed the overall ability of the DIB to produce the six case-study weapon systems. Our future production analysis found that:

- After early design and testing problems, a projected quadrupling of Phoenix production is scheduled to occur and this increase may cause competition between Phoenix and other Hughes-built missiles. Production quality problems noted by the Navy and the subsequent suspension of Phoenix production adds additional uncertainty. The GAO advises monitoring this situation closely.
- M1 tank production now meets current Defense requirements, and these levels can be maintained; however, there is concern about the M1's foreign-source dependence, the continued practice of parts "slaving", and the possibility that competing demands in a recovering economy could siphon away skilled labor material. GAO recommends a close watch on this system.
- TOW2 should be able to meet projected peacetime demand, although subcontractors that build components for

Hellfire missiles and commercial semiconductor markets could begin to feel the constraint of competing demands. Again, final judgment awaits resolution of production quality problems at the Hughes plant.

- Harpoon is maintaining present demand, and GAO sees no problem if demand does not increase. The situation might be affected, however, by increased foreign sales of the missile.
- F100 engine production is meeting present requirements, but the ability of the DIB to produce it in increased numbers is unpredictable now, with a second prime contractor (General Electric) scheduled to begin F100 production.
- the Global Positioning System could not be evaluated because of a lack of production data at this time.

CONCLUDING OBSERVATIONS

Our analysis provided information of two kinds: information that had been unavailable before our review, and information about problems in the DIB which were well known but about which little had been done. An example of the first is the identification of a subcontractor's total dependence on foreign sources for glass optics. When questioned the Service had been unaware of this fact. As an example of the second type, one component on the gunner's primary sight of the M1 tank, "slaved" since production of the very first tank, was still being slaved at the time of our visit to General Dynamics. The problem had not been ameliorated over the five-year period; instead, two additional components, produced by the same contractor, have also required "slaving" to meet production needs.

These two types of problems call for different responses. Where GAO provided information that had been unavailable before the present review, it indicated the inadequacy of DOD's data and monitoring systems for supporting industrial preparedness planning and shows that these data and monitoring systems need to be improved. Where information is known, appropriate action seems reasonable, but no action is taken, there is a need for DOD to improve its response to DIB problems.

Selecting critical items

Any information produced is most useful if the "most important" systems and components are selected for data collection and analysis. As noted earlier, there is no assurance that the most essential items are selected for industrial preparedness planning. An expanded subtier analysis requires a method that focuses quickly and economically on critical components and materials. We believe that it is important to apply a consistent set of criteria for determining critical items that go beyond simply looking at long leadtimes.

Obtaining better data

Our case studies make clear that it is possible to identify critical weapon system components and materials that are produced not only by prime contractors but also at the lower tiers of the DIB. Moreover, it is possible to identify current and potential production constraints on the ability of individual contractors to meet defense requirements, and to assess the overall ability of contractors to meet planned production levels of weapon systems.

GAO's analysis indicates that most current and potential production constraints occur not at the level of the prime contractors but at the lower tiers of the DIB. However, the general understanding of subtier production capabilities and problems would benefit from information that is now lacking. Such information includes subcontractors' physical plant capacity, numbers of employees, foreign sources of components and raw materials, scrap and rework rates, proprietary production processes, actual and potential production levels, numbers of shifts and days on which production machinery and testing facilities operate, unit costs, leadtimes, vendors of components and materials, and delivery histories. Additionally, demand data are needed on components and materials that draw productive resources away from weapon system production.

Establishing baseline data

High unit costs and long leadtimes for components and materials are indicators of current constraints. The ability to know when costs and leadtimes or other indicators are changing over a period of time, as shown by trend variables, could go a long way toward developing a capability to anticipate and prevent future constraints. It is, therefore, important to establish a data base that identifies trends in past production problems.

Improving accuracy and verification

We were impressed with how much need there is for better accuracy and greater verification of production data. We encountered instances of prime contractors' providing data on subcomponents that differed substantially from the data provided on these same subcomponents by the subtier producers themselves. In constructing our method and conducting our review, GAO found it highly useful to collect data from subcontractors at all tiers. Making site visits can increase the general knowledge about the subtier contractors among program managers and service representatives. Gathering data firsthand and asking follow-up questions helps clarify issues. Information from several tiers is extremely useful because it helps in verifying the accuracy of data from different sources.

Focusing on cooperative efforts

We believe there is a need for consistent data on many weapon systems collected from and coordinated with the Army, Navy, and Air Force, DOD's industrial preparedness planners, and the contractors and subcontractors of the DIB. Some of the recent DOD initiatives are being conducted as tri-service efforts. GAO believes this is an appropriate action and that the focus on coordination should be continued and expanded. One important aspect may be to institutionalize this coordination in a central DOD unit with responsibility for collecting, computerizing, and analyzing data on the DIB.

MATTERS FOR CONSIDERATION

Overall we are concerned with shortfalls in the information available for identifying problems in the DIB. Better information is only a minimum need. It is not, by itself, a solution to the issue of when and how to respond to problems. We are encouraged by DOD's recent initiatives in this area and believe the implementation of these initiatives should focus on:

- the extent to which information and production problems occur at the subcontractor level;
- actions that can be taken to improve the armed services' understanding of and response to problems in the defense industrial base; and
- the need for the services to improve their monitoring and verification of contractor data.

GAO's efforts have identified two other important matters that should be considered by defense industrial preparedness planners. They are:

- the usefulness of implementing a method, such as the one developed by GAO, consistently across all of the armed services in a way that ensures continuous, accurate, and generalizable information on the state of the defense industrial base; and
- the desirability of creating a central unit in the Department of Defense for collecting, computerizing, and analyzing data on the defense industrial base.

Mr. Chairman, this concludes my statement. We thank you for the opportunity to present our views here today and would be happy to explain any part of our testimony or answer any questions the Committee may have.

Senator **Proxmire**. Thank you, Mrs. Chelimsky, and you and the General Accounting Office and your colleagues I think have done an excellent job. It's really a devastating indictment and I think the Defense Department has a lot to answer for.

Now, Mr. Kendig, you're representing the Defense Department and, as you know, we invited Deputy Secretary of Defense Taft and he declined to come. He said that you were exactly the right man for the job to testify before us as Director of Cost, Pricing, and Finance. Frankly, I am very disappointed that Mr. Taft didn't come. We're delighted to have you and I'm sure you are highly qualified, as Mr. Taft indicated. But we've had Under Secretary Clemings appear before us, we've had Under Secretary McNamar, Defense Secretary Laird, and Defense Secretary Schlessinger. They've all come when we've invited them to come, but Mr. Taft felt that he shouldn't appear and he's a policymaking official and I think he has the responsibility and should appear and I hope he will appear in the future. We're going to keep after him until we hope he will agree to do so.

Now, Mr. Kendig, as I say, I have great faith in your ability based on what Mr. Taft told us, but your prepared statement frankly reads like a primer on procurement. It tells us what the regulations are, which we knew, of course, and could find out without having a witness come up and testify. What we want to know is why these costs are so high. You've had a clear case set forth here by the GAO and by Mr. Han, speaking as a representative of small defense contractors. We wanted some answers on that and I don't see any answers in here. You tell us what should be done, what the framework is, what the regulations require. You give us some definitions. But I hope in your 10 minutes you will summarize and give us an answer to what's wrong here and what the Defense Department intends to do about it.

Representative **Scheuer**. Senator, may I just say a word very briefly?

Senator **Proxmire**. Certainly, Congressman Scheuer.

Representative **Scheuer**. Mr. Kendig, as far as procurement is concerned, your agency is out of control. It seems to me there ought to be far more humility and far more acute feeling of embarrassment over there than there is.

The American public is sick to death of paying $7,000 for a $40 coffee maker and all the way down the line, on all the items, all the horror stories we have read about.

Up in Congress, we want this situation put aright. Now you have defied our best efforts up to now in the game playing, if you will. We have not been able to provide the kind of rigorous day-to-day oversight over the procurement policies of the Defense Department that probably should be applied. We don't have that kind of staff and frankly people like Senator Proxmire and others, even myself, we don't apply our whole lives to this particular problem of the total disarray and chaos in the Defense Department. We have other things that we are interested in, other missions in life.

So you get the divided efforts of a few devoted people up here like the Senator and we don't have the kind of staff that can really ride herd on your Department, but it seems to me it shouldn't be necessary. It seems to me that if there were any sense of competence, of pride and accomplishment down there, you would want to wipe the slate clean of these persistent annual scandals that erupt just as predictably as the seasons follow each other—summer, autumn, winter, and so forth.

Why can't your agency get a handle on this? The Senator was telling us yesterday of hearings that he had 10 years ago on this subject. I met 12 or 13 years ago for the first time with Ernest Fitzgerald and all we can say is that the more things change, the more they remain the same.

This problem seems to get worse. Why doesn't the Defense Department have the sense of pride and a sense of accomplishment in their own competence, their own effectiveness, to get a handle on this situation? That's what we want to know. And far more important than that, that's what the American people what to know. They are really fed up, and your performance—and I say that as a collective "your," I don't mean you personally—the performance of the Defense Department brings Government into shame and disrepute. We all lose our credibility. People out there in the boondocks of America don't discriminate between the executive branch and the legislature branch, between Republicans and Democrats, between the House and the Senate. They think Government just isn't working and Government is ripping them off and Government is wasting their money and Government is taxing them unnecessarily and that Government is composed of a bunch of incompetents and fools. That's what we're all suffering under.

We are looking to you for help. We haven't been able to provide the initiative. That must come from you. What are you going to do? I hope during your 10 minutes you will give us some hope that there will be some massive comprehensive effort to get this problem under some kind of discipline, under some kind of control.

Senator PROXMIRE. Go right ahead, sir.

STATEMENT OF JOHN L. KENDIG, DIRECTOR FOR COST, PRICING AND FINANCE, OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

Mr. KENDIG. Well, good morning, Senator Proxmire and Representative Scheuer. I was pleased to be asked to come over here today to appear before the subcommittee to present my views on the cost accounting system of the defense contractors and weapons pricing, and that is what the request was when it arrived in my office.

Now I really have been asked to do something different. I do have my prepared statement for the record.

Senator PROXMIRE. We will be happy to have your prepared statement printed in full in the record.

Mr. KENDIG. I believe that properly reflects what I was asked to testify about in the letter. However, you gentlemen have asked me to do something else and I will try and take this opportunity—I will depart from summarizing my statement and try to address some of the questions that you have asked.

One point that I do have in my prepared statement which I do think is very important in connection with the questions that have been asked are some of the allegations concerning the excessive costs of Government weapon systems when compared to electronic equipment that someone might be able to buy at the local store.

Specifically, I am speaking about an allegation to the effect that if contractors were to produce television sets in the same manner they produce our electronic equipment, the television sets would cost about $100,000 each. Well, I would have to agree that if they did produce television sets in the same way they produce our electronic equipment they would cost $100,000 apiece. But I think that this is really a distortion of what the situation is.

For instance, let's assume that a radar, one of which we are going to buy 1,000 units, requires 30 million dollars worth of engineering and develoment costs. Now this would mean that on each radar unit we would have to charge at least $30,000 per unit for that development cost. Now if a commercial company planned to market a TV set and also incurred 30 million dollars' worth of development costs, he would be planning to sell somewhere in the neighborhood of about 1 million of these TV sets and, therefore, that $30 million would be spread over 1 million TV sets.

Given these considerations, it just is not reasonable to compare the cost of the TV set to our electronic equipment. We have these problems and these problems are one of quantity, one which we certainly cannot overcome. We never intend and you never intend for us to buy equipment in those quantities and we hope that we never need them in those quantities.

Another statement was just made a moment ago about a $7,000 coffeemaker and it was compared to a $40 coffeemaker. Now I have been given to understand in connection with that particular coffeemaker that the original one probably was overengineered and it should not have cost some $7,000. The overengineering, though, in the specifications were ones I understand the military asked for, so it was not a fact that the contractors overcharged us for the particular item; it was the fact that the requirements and the specifications were actually too high.

However, the unit that we are now purchasing I'm given to understand actually costs less than the same units that are being manufactured and put into the commercial airlines. In other words, the units that we're talking about are units that must go into an aircraft. It flies at all kinds of levels, under all kinds of conditions. It must be subject to tremendous stress and certainly we do not in the service condone overengineering. When we recognize it, we get rid of it. We did it in this case. We are now buying units that are comparable to the ones that are in commercial airlines and we are paying less than what the commercial airlines are paying. This is what I've been told in questioning some of the people in the Air Force, but it's still going to cost us somewhere in the neighborhood of $2,700 to $3,000 for that unit. It's never going to cost $40.

And let me say that as a father who happens to have one son who just completed his reserve training, basic training in the Marine Corps, and has asked for extended duty with the Marine Corps and with another son who is going to enter into basic training in February 1985, that I hope they never put a $40 unit on one of the military aircraft that they're going to fly. It would be suicide to have anything like that on an aircraft and if that thing went up it would be a timebomb. I certainly think we have to have properly engineered equipment and it should not be overengineered and we should not pay more than is necessary, but I certainly think it is unfair to compare these things to $40 coffee makers. I don't want my sons, and I'm sure the parents in this country don't want their sons dealing with the cheapest thing and putting them in jeopardy.

Now, as for what was presented yesterday in the way of the standard hours for the six contractors, I looked that over yesterday and I noted that at least in connection with those contractors that I knew of that had comparable commercial business that the standard hours in my view for the comparable commercial business is the same. Those standard hour costs against our contracts is no different than the standard hour costs that those contractors are incurring on the business where they are producing items for commercial companies, and this is in a competitive worldwide market we're talking about.

Now what is the explanation for that? The explanation for it is twofold. Again, we are looking at contractors who are dealing with the production of limited quantities, whether we are talking about the quantities produced for the U.S. Government or whether we are talking about the quantities produced for the commercial marketplace. We simply do not produce millions of aircraft in either event.

Therefore, all the costs that we are talking about at those major manufacturing locations must be absorbed by a very limited amount of production.

Now the second part of the question is, well, why are those same rates that are used for producing the item itself, why are those rates or rates that are very comparable to that used in connection with the production of these spare parts?

To the extend that we are talking about spare parts that have items that come from subcontrators and they must be worked on in the plant—in other words, value added, combined with something else—when we are talking about those spare parts, we have what I consider to be very good set of regulations that were promulgated by the Cost Accounting Standards Board, an organization that was established by the Congress and work as a branch of the Congress.

Now whatever goes through a particular production line in a particular plant has to be costed under the rules of the Cost Accounting Standards. Therefore, if we have a part that is going through—whether it is going to go partially through the system and end up as a spare part or go completely through the system and end up as a part of the system itself, it must be costed in the same manner.

Now when we look at a major production company we see a company that is not only manufacturing an item to a completed design; it is in the process of developing those items and, in addition to that, it has substantial sustaining engineering in connection with those items to make sure that those items are meeting all the specifications and all the changes that we may have to those systems.

After all, most of the time our systems are not static, but go through constant change. All of these costs, by virtue of rules of the Cost Accounting Standards, must be allocated to all work that goes through that plant and through that production line. Therefore, if those parts do go through that line, they absorb that cost.

Now when we go to the other portion of it, the question of why aren't more of these parts broken out when they can be, where we are not talking about spare parts which must come into a contractor's system and must have value added, but is simply purchased and passed on to the Government?

In this respect, I have to say that I agree with you, that over the years we have had constant trouble with attempting to break out parts, to isolate these, to put them up for competition; but I have to say to you gentlemen that in reality I think that the people within the Department of Defense and the people who are down there in the pits doing the work have really been trying to do this and really working on it as hard as they can, but it's massive. We're talking about some 3 million parts.

Now we do have at this time a whole new initiative that is going on in this area and I will also have to say to you for the first time I believe that the policies that are up at the top are actually being heard down at the working levels and that these people do know that this is really what they are expected to do, and I believe you will see substantial improvements.

I think if you were to go out now and go to the centers and see what's going on with the competition advocates and the other people that are attempting to break this out, I think you would see a significant difference.

I also think that examples of the thousands of telephone calls that come into the Pentagon into the inspector general's office is an indication that the administration of Caspar Weinberger has reached the people that are down there working because we never had this before. We've had that hot line over at the Pentagon for 3 years. The volume has increased tremendously. I believe that you will see that the efforts that have been taken over the past year to year and a half are beginning to pay off.

The inspector general's report on spare parts, if one would examine that, you can look at that from two views. You can look at it from the viewpoint of how awful it is and how awful the conditions are out there, or you can make another analysis of it and say, OK, this is a report that was given to management and what does it do? If one were to look at that report carefully, you would notice that the inspector general used a very broad term for determining whether something was reasonable or unreasonable. He said, "If in any way, shape, or form we could find a price that was lower, what you did in purchasing it, if it were higher, was an unreasonable price." He, therefore, identified items that were overpriced by as much as 1 cent or 2 cents in that report for a total contract impact of maybe $100 for that item.

Now the question is, when we get a report like that, what do we do with it? I don't think that report, when one looks at it, notices the percentages of items that were actually overpriced under that definition; the amounts that were overpriced under that definition, that it spells out something that was horrible. I think it spells out something that tells us where our problems are, where we have to concentrate, and that there are some areas where we will always have problems.

For instance, when we talk about the clawhammer. Yes, somebody made a mistake. However, that was one clawhammer that somebody bought under those conditions and we had virtually thousands of those hammers that we also bought through our system for $6. So somebody asked the wrong person to buy something.

On the diodes, there were two diodes that were purchased for the kind of prices that you were talking about. There were 122,000 diodes that went through the system that our people purchased correctly and bought them through the system and we got them for 4 cents apiece.

So I agree with you gentlemen that there are problems. I don't agree that we are not working on it and I think that you will see the results. Thank you.

[The prepared statement of Mr. Kendig follows:]

PREPARED STATEMENT OF JOHN L. KENDIG

GOOD MORNING MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE. I AM PLEASED TO HAVE THE OPPORTUNITY TO APPEAR BEFORE YOU TODAY TO PRESENT MY VIEWS ON COST ACCOUNTING SYSTEMS OF DEFENSE CONTRACTORS AND WEAPONS PRICING. MY STATEMENT COVERS THREE PRIMARY TOPICS:

1. COST ACCOUNTING SYSTEMS
2. TYPES OF CONTRACTS
3. WEAPONS PRICING

COST ACCOUNTING SYSTEMS. I RECOGNIZE THAT YOU, SENATOR PROXMIRE, ARE THE INDIVIDUAL WHO INTRODUCED THE AMENDMENT TO THE DEFENSE PRODUCTION ACT THAT LED TO THE CREATION OF THE COST ACCOUNTING STANDARDS BOARD. CONSEQUENTLY, I AM SURE YOU ARE FULLY COGNIZANT OF THE REQUIREMENTS OF COST ACCOUNTING STANDARDS. THE ACCOUNTING SYSTEMS OF THE SIX CONTRACTORS IN QUESTION ARE REQUIRED TO COMPLY WITH THE NINETEEN COST ACCOUNTING STANDARDS. ALL SIX HAVE SUBMITTED DISCLOSURE STATEMENTS TO THE GOVERNMENT WHICH DESCRIBE THEIR COST ACCOUNTING SYSTEMS. IN EACH CASE, THE DISCLOSURE STATEMENT HAS BEEN REVIEWED BY THE DEFENSE CONTRACT AUDIT AGENCY AND THE CONTRACTING OFFICER HAS DETERMINED THAT IT ADEQUATELY DESCRIBES THE COMPANY'S COST ACCOUNTING PRACTICES.

TYPES OF CONTRACTS. THE SELECTION OF CONTRACT TYPE IS AN IMPORTANT CONSIDERATION IN CONSTRUCTING A SOUND BUSINESS ARRANGEMENT BETWEEN THE GOVERNMENT AND A CONTRACTOR. IT WILL DEFINE THE LEVEL OF RISK ASSUMED BY EACH PARTY AND BECOME A MAJOR FACTOR IN THE DETERMINATION OF CONTRACT PRICE.

ALL CONTRACTS FALL INTO TWO BROAD CATEGORIES: FIXED-PRICE CONTRACTS AND COST-REIMBURSEMENT CONTRACTS. WITHIN THESE TWO CATEGORIES THERE ARE A NUMBER OF SMALLER SUBGROUPINGS OF CONTRACT TYPES, NAMED PRINCIPALLY FOR THEIR PARTICULAR STRUCTURE. EXAMPLES INCLUDE FIXED-PRICE INCENTIVE CONTRACTS, FIRM-FIXED-PRICE LEVEL-OF-EFFORT CONTRACTS, COST-PLUS-INCENTIVE-FEE CONTRACTS, COST-PLUS-AWARD-FEE CONTRACTS, ETC.

THE DEFENSE ACQUISITION REGULATION PROVIDES EXPLICIT GUIDANCE TO CONTRACTING OFFICERS FOR SELECTING CONTRACT TYPES. THE GOVERNING PRINCIPAL IS TO EMPLOY THAT CONTRACT TYPE WHICH WILL RESULT IN REASONABLE RISK TO THE CONTRACTOR AND STILL PROVIDE A TANGIBLE INCENTIVE FOR EFFICIENT AND ECONOMICAL PERFORMANCE. WHERE CONTRACT COST RISK CAN BE REASONABLY DEFINED, A FIRM-FIXED-PRICE CONTRACT IS PREFERRED. THIS PLACES MAXIMUM RESPONSIBILITY FOR PERFORMANCE ON THE CONTRACTOR AND ACHIEVES FULL USE OF THE BASIC PROFIT MOTIVE OF A BUSINESS. TYPICALLY, A FIRM-FIXED-PRICE CONTRACT WOULD BE USED FOR ACQUIRING COMMERCIAL PRODUCTS OR OTHER GOODS AND SERVICES WHEN THERE ARE REASONABLY DEFINITE SPECIFICATIONS. AT THE OTHER EXTREME, A COST-REIMBURSEMENT CONTRACT IS APPROPRIATE WHERE CONTRACT COST RISK IS VERY HIGH. A TYPICAL APPLICATION WOULD BE FOR STATE-OF-THE-ART RESEARCH AND DEVELOPMENT. IN THIS CASE, THE CONSIDERABLE UNCERTAINTY INVOLVED DOES NOT PERMIT A REASONABLE BASIS FOR PREDICTING COST WHICH IS NEEDED FOR A FIXED-PRICE-TYPE CONTRACT.

IN SELECTING CONTRACT TYPE, SEVERAL FACTORS MUST BE FULLY CONSIDERED. THESE INCLUDE THE FOLLOWING:

- EXTENT OF PRICE COMPETITION

- RELIABILITY OF COST OR PRICE ANALYSIS USED TO SUPPORT THE DEGREE OF RESPONSIBILITY ASSIGNED TO THE CONTRACTOR.
- COMPLEXITY OF GOODS AND SERVICES TO BE ACQUIRED BY THE GOVERNMENT.
- PERIOD OF CONTRACT PERFORMANCE OR LENGTH OF PRODUCTION RUN.
- NATURE AND EXTENT OF SUBCONTRACTS PLANNED BY THE PRIME CONTRACTOR.

CONTRACT TYPE IS A SIGNIFICANT DETERMINANT OF PRICE. UNDER THE WEIGHTED GUIDELINES METHOD OF DEVELOPING PRENEGOTIATION PROFIT OBJECTIVES, THERE IS AN EXPLICIT PROFIT FACTOR FOR CONTRACT TYPE. THIS FACTOR IS IN ADDITION TO THE PROFIT FACTORS FOR CONTRACTOR TECHNICAL INPUT AND CAPITAL EMPLOYED. FOR EXAMPLE, A PROFIT FACTOR OF SIX TO EIGHT PERCENT OF PREDICTED COSTS MAY BE ALLOWED FOR A FIRM-FIXED-PRICE CONTRACT. FOR A COST-REIMBURSEMENT CONTRACT, THE PROFIT FACTOR FOR COST RISK MUST BE LESS THAN ONE-HALF OF ONE PERCENT. IT IS NORMALLY ZERO. IT MUST BE STRESSED THAT PROFIT IS DEVELOPED ON PREDICTED COSTS NOT ACTUAL COSTS. COST-PLUS-A-PERCENTAGE-OF-COST CONTRACTS ARE EXPRESSLY PROHIBITED.

WEAPONS PRICING. AN ALLEGATION HAS BEEN MADE THAT DOD HAS NO SYSTEM THAT EVALUATES THE REASONABLENESS OF THE UNIT COSTS IN WEAPONS SYSTEMS PROCUREMENTS. THE STATEMENT HAS ALSO BEEN MADE THAT IF COMMERCIAL COMPANIES PRICED TV SETS LIKE GOVERNMENT CONTRACTORS PRICE ELECTRONIC HARDWARE, THE TV SETS WOULD COST ABOUT $100,000 EACH.

WITH REGARD TO THE FIRST ALLEGATION, MY STATEMENT INCLUDES A DETAILED STEP-BY-STEP PROCESS THAT CLEARLY SHOWS THAT DOD DOES, IN FACT, HAVE AN EXCELLENT SYSTEM IN PLACE TO EVALUATE THE REASONABLENESS OF THE COST OF WEAPON SYSTEMS. WITH RESPECT TO THE $100,000 TV SETS, ONE MUST RECOGNIZE THAT THE REQUIRED ENGINEERING DEVELOPMENT COSTS FOR ELECTRONIC HARDWARE MUST BE ABSORBED BY THE RELATIVELY SMALL NUMBER OF UNITS THAT WE BUY. THIS IS CONTRASTED TO COMMERCIAL COMPANIES SPREADING THE DEVELOPMENT COSTS ON TV SETS TO MILLIONS OF UNITS PRODUCED.

FOR EXAMPLE, LET'S ASSUME THAT FOR A RADAR BUY OF 1000 UNITS THE CONTRACTOR PROPOSES $30 MILLION FOR ENGINEERING DEVELOPMENT COSTS. THIS WOULD BE $30,000 PER UNIT BASED ON 1000 UNITS PURCHASED. NOW LET'S ASSUME THAT A COMMERCIAL COMPANY PLANNED TO INCUR $30 MILLION OF ENGINEERING DEVELOPMENT COST ON A TV SET BUT PLANNED TO SELL ONE MILLION SETS. THIS WOULD BE $30 PER SET FOR ENGINEERING DEVELOPMENT COST ON A TV SET THAT WOULD SELL IN THE RANGE OF ABOUT $400 to $600 EACH.

A DESCRIPTION OF THE DOD PROCEDURES FOR REQUESTING, EVALUATING AND NEGOTIATING CONTRACTOR PRICE PROPOSALS IS AS FOLLOWS:

PRE-PROPOSAL EFFORT. PRIOR TO REQUESTING A PRICE PROPOSAL FROM A CONTRACTOR, THE CONTRACTING OFFICER PREPARES A DOCUMENT TITLED "REQUEST FOR PROPOSALS." DETAILED INSTRUCTIONS ON THE PREPARATION OF THIS DOCUMENT ARE INCLUDED IN OUR REGULATIONS. THESE INSTRUCTIONS TO THE CONTRACTING OFFICER PROVIDE GUIDANCE TO

INSURE THAT ANY SUBSEQUENT CONTRACT COMPLIES WITH ALL APPLICABLE LAWS AND REGULATIONS ISSUED BY THE DOD. FOR EXAMPLE, THE REQUEST FOR PROPOSAL WILL INCLUDE A DESCRIPTION OF ANY INFORMATION REQUIRED TO SUPPORT PROPOSED PRICES. AS A MINIMUM, IT WILL INSTRUCT THE CONTRACTOR TO SUBMIT ITS PROPOSAL ON A STANDARD FORM 1411, CONTRACT PRICING PROPOSAL. THE PURPOSE OF THIS STANDARD FORM IS TO PROVIDE A VEHICLE WHEREBY THE OFFEROR SUBMITS TO THE GOVERNMENT A PRICING PROPOSAL OF ESTIMATED AND/OR INCURRED COSTS BY CONTRACT LINE ITEM WITH SUPPORTING INFORMATION, ADEQUATELY CROSS-REFERENCED, SUITABLE FOR DETAILED ANALYSIS. THE FORM ITSELF PROVIDES DETAILED INSTRUCTIONS ON THE TYPE AND EXTENT OF DATA REQUIRED. IN ADDITION, THE SF 1411 MUST BE SIGNED BY AN OFFICIAL OF THE COMPANY. IT ALSO CONTAINS A PROVISION WHEREBY, THE OFFEROR, IF SELECTED FOR NEGOTIATIONS, GRANTS TO THE CONTRACTING OFFICER, OR HIS AUTHORIZED REPRESENTATIVE, THE RIGHT TO EXAMINE THOSE BOOKS, RECORDS, DOCUMENTS AND OTHER SUPPORTING DATA WHICH WILL PERMIT ADEQUATE EVALUATION OF THE PROPOSED PRICE. THE FORM ALSO CONTAINS A PROVISION THAT THE OFFEROR SHALL SUBMIT A CERTIFICATE OF CURRENT COST OR PRICING DATA UPON CONCLUSION OF THE NEGOTIATIONS AND THE DATE UPON WHICH THE PRICE WAS AGREED TO BY THE PARTIES.

THE REQUEST FOR PROPOSAL IDENTIFIES THE CLAUSES THAT WILL BE REQUIRED TO BE INCLUDED IN ANY SUBSEQUENT CONTRACT. WITH RESPECT TO CONTRACT PRICING, THE PERTINENT CLAUSES ARE:

1. PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (FAR 52.215-22). BRIEFLY, THIS CLAUSE GIVES THE GOVERNMENT A RIGHT TO A DOWNWARD ADJUSTMENT TO THE CONTRACT PRICE IF IT IS DETERMINED THAT COST OR PRICING DATA SUBMITTED WAS NOT COMPLETE, ACCURATE AND CURRENT AS CERTIFIED IN THE CONTRACTOR'S CERTIFICATE OF CURRENT COST OR PRICING DATA.

2. SUBCONTRACTOR COST OR PRICING DATA (FAR 52.215-24). THIS CLAUSE STATES THAT THE CONTRACTOR SHALL REQUIRE SUBCONTRACTORS TO SUBMIT COST OR PRICING DATA AND THAT SUCH DATA BE CERTIFIED BY THE SUBCONTRACTOR. THIS CLAUSE ALSO REQUIRES THAT THE CONTRACTOR SHALL INSERT THE SUBSTANCE OF THIS CLAUSE IN EACH SUBCONTRACT WHICH EXCEEDS $500,000.

3. AUDIT BY DEPARTMENT OF DEFENSE (FAR 52.215-2). IF THE CONTRACTOR SUBMITTED COST OR PRICING DATA IN CONNECTION WITH THE PRICING OF THIS CONTRACT OR ANY CHANGE OR MODIFICATION THERETO, WHEN COST OR PRICING DATA WAS REQUIRED, THE CONTRACTING OFFICER OR HIS REPRESENTATIVE WHO ARE EMPLOYEES OF THE UNITED STATES GOVERNMENT SHALL HAVE THE RIGHT TO EXAMINE ALL BOOKS, RECORDS, DOCUMENTS AND OTHER DATA OF THE CONTRACTOR RELATED TO THE NEGOTIATION, PRICING OR PERFORMANCE OF SUCH CONTRACT, CHANGE OR MODIFICATION FOR THE PURPOSE OF EVALUATING THE ACCURACY, COMPLETENESS AND CURRENCY OF THE COST OR PRICING DATA SUBMITTED.

WE NOW SEE THAT THE REQUEST FOR PROPOSAL IS A KEY DOCUMENT USED BY DOD TO INSURE THAT WE REQUEST ADEQUATE COST OR PRICING DATA, THAT REQUIRED CONTRACT CLAUSES ARE IDENTIFIED FOR INCLUSION IN ANY RESULTANT CONTRACT, AND THAT THE CONTRACTOR IS MADE AWARE OF THE REQUIREMENT OF CERTIFICATION OF THE COST OR PRICING DATA.

PROPOSAL EVALUATION EFFORT. AFTER RECEIPT OF THE CONTRACTOR'S PROPOSAL, THE CONTRACTING OFFICER INITIATES THE PROPOSAL EVALUATION PROCESS. THE BASIC POLICY OF THE DOD IS TO PROCURE SUPPLIES AND SERVICES FROM RESPONSIBLE SOURCES AT FAIR AND REASONABLE PRICES CALCULATED TO RESULT IN THE LOWEST OVERALL COST TO THE GOVERNMENT. TO ACHIEVE THIS OBJECTIVE, THE CONTRACTING OFFICER MUST ADHERE TO OUR POLICIES AND PROCEDURES WHICH ARE DESIGNED TO PROVIDE THE FRAMEWORK FOR A COMPREHENSIVE EVALUATION OF THE CONTRACTOR'S PROPOSAL. EACH CONTRACTING OFFICER IS RESPONSIBLE FOR PERFORMING OR HAVING PERFORMED ALL ADMINISTRATIVE ACTIONS NECESSARY FOR EFFECTIVE CONTRACTING. THE CONTRACTING OFFICER SHALL AVAIL HIMSELF OF ALL APPROPRIATE ORGANIZATIONAL TOOLS SUCH AS THE ADVICE OF SPECIALISTS IN THE FIELDS OF CONTRACTING, FINANCE, LAW, CONTRACT AUDIT, PACKAGING, ENGINEERING, TRAFFIC MANAGEMENT, AND PRICE ANALYSIS. TO THE EXTENT SERVICES OF SPECIALISTS ARE UTILIZED IN THE NEGOTIATION OF CONTRACTS, THE CONTRACTING OFFICER MUST COORDINATE A TEAM OF EXPERTS, REQUESTING ADVICE FROM THEM, EVALUATING THEIR COUNSEL, AND AVAILING HIMSELF OF THEIR SKILLS. HE SHALL NOT, HOWEVER, TRANSFER HIS OWN RESPONSIBILITY TO THEM. THEREFORE, THE DETERMINATION OF THE SUITABILITY OF THE CONTRACT PRICE TO THE GOVERNMENT ALWAYS REMAINS THE RESPONSIBILITY OF THE CONTRACTING OFFICER. I WANT TO EMPHASIZE HERE, EVEN THOUGH THE CONTRACTING OFFICER HAS THE RESPONSIBILITY FOR THE CONTRACT PRICE, HE CANNOT SIMPLY JUST DISREGARD THE ADVICE RECEIVED FROM THE VARIOUS SPECIALISTS SUCH AS THE CONTRACT AUDITOR. ON THE CONTRARY, WE HAVE A NUMBER OF

CHECKS AND BALANCES BUILT INTO OUR PROCUREMENT PROCESS TO ALLOW SIGNIFICANT DIFFERENCES OF OPINION TO SURFACE AND BE RESOLVED IN THE BEST INTEREST OF THE OVERALL PROCUREMENT ACTION.

PRIOR TO NEGOTIATION OF A CONTRACT OR MODIFICATION RESULTING FROM A PROPOSAL IN EXCESS OF $500,000, WHEN THE PRICE IS BASED ON COST OR PRICING DATA SUBMITTED BY THE CONTRACTOR, THE CONTRACTING OFFICER SHALL REQUEST A FIELD PRICING REPORT (WHICH USUALLY INCLUDES AN AUDIT REVIEW BY THE CONTRACT AUDIT ACTIVITY).

THE GOVERNMENT PLANT REPRESENTATIVE OR THE ADMINISTRATIVE CONTRACTING OFFICER (ACO), AS WELL AS THE CONTRACT AUDITOR, IS RESPONSIBLE FOR PROVIDING A COMPLETE AND ACCURATE FIELD PRICING REPORT TO THE PROCURING CONTRACTING OFFICER (PCO). A FIELD PRICING REPORT CONTAINS THE ANALYSIS OF CONTRACTING PRICING PROPOSALS BY ANY OR ALL FIELD TECHNICAL AND OTHER SPECIALISTS, INCLUDING PLANT REPRESENTATIVES, ADMINISTRATIVE CONTRACTING OFFICERS, CONTRACT AUDITORS AND PRICE ANALYSTS. THE SUMMARY FIELD PRICING REPORT PREPARED BY THE ACO WILL NORMALLY INCLUDE A DCAA AUDIT REPORT AND A TECHNICAL ANALYSIS REPORT.

THE AUDIT REPORT WILL NORMALLY CONTAIN A SUMMARY OF THE CONTRACTOR'S PROPOSED COSTS AND THE AUDITORS EVALUATION OF THESE COSTS. THE AUDITOR WILL SET FORTH THE BASIS AND METHOD USED BY THE CONTRACTOR IN PREPARING THE PROPOSAL AND WILL ALSO COMMENT ON THE ADEQUACY OF THE COST OR PRICING DATA SUBMITTED IN SUPPORT OF THE PROPOSAL. THE AUDIT REPORT WILL CONTAIN SPECIFIC COMMENTS IN THOSE AREAS WHERE THE AUDITOR TAKES EXCEPTION TO OR QUESTIONS CERTAIN COSTS. THE AUDITOR WILL QUANTIFY THESE COSTS IN TERMS OF

DOLLARS QUESTIONED. THE AUDITOR IS NORMALLY RESPONSIBLE FOR REVIEWING THE FINANCIAL OR COST ASPECTS OF THE PROPOSAL. THIS WOULD INCLUDE SUCH THINGS AS MATERIAL PRICES, LABOR RATES, OVERHEAD OR G&A RATES AND OTHER DIRECT COSTS SUCH AS COMPUTER RATES AND TRAVEL EXPENSE. WHEN THE TECHNICAL EVALUATION REPORT IS AVAILABLE PRIOR TO ISSUANCE OF THE AUDIT REPORT, THE AUDIT REPORT WILL NORMALLY INCORPORATE THE FINANCIAL IMPACT OF THE RECOMMENDATIONS CONTAINED THEREIN.

TECHNICAL ANALYSIS REPORTS ARE NEEDED TO ESTABLISH THE REASONABLENESS OF THE QUANTITATIVE FACTORS CONTAINED IN THE PROPOSAL (LABOR HOURS, MANUFACTURING, ENGINEERING ETC., AND SKILL MIX, TYPES AND QUANTITIES OF MATERIAL, COMPUTER AND TRAVEL REQUIREMENTS, ETC). THE OVERALL REASONABLENESS OF THE PROPOSAL CANNOT BE ESTABLISHED WITHOUT AN EFFECTIVE TECHNICAL ANALYSIS OF THE QUANTITATIVE FACTORS INCLUDED IN THE PROPOSAL. TECHNICAL PERSONNEL USUALLY PERFORM THE ANALYSIS AT THE EARLIEST POSSIBLE DATE, AND, WHERE PRACTICABLE, AT LEAST 5 DAYS PRIOR TO THE DUE DATE OF THE AUDIT REPORT. WELL-STRUCTURED TECHNICAL ANALYSIS REPORTS OF CONTRACTORS' PROPOSALS THAT PRESENT INFORMATION IN A CONCISE MEANINGFUL MANNER ARE A VALUABLE TOOL FOR THE SUPPORT OF CONTRACT NEGOTIATIONS. THE TECHNICAL ANALYSIS OF THE COST PROPOSAL IS NECESSARY TO ASSIST TECHNICAL PERSONNEL IN EVALUATING THE OFFEROR'S UNDERSTANDING OF TECHNICAL REQUIREMENTS AND THE QUALITY OF THE TECHNICAL PROPOSAL, AS WELL AS TO ASSIST THE CONTRACTING OFFICER IN ESTABLISHING THE REASONABLENESS OF THE CONTRACT PRICE. TO ACCOMPLISH THIS END THE ACO MUST:

1. IN CONCERT WITH THE AUDITOR, ESTABLISH A DUE DATE FOR THE AUDITOR'S REPORT;

2. IDENTIFY AREAS OF THE CONTRACTOR'S PROPOSAL FOR SPECIAL CONSIDERATION (THESE WOULD BE IN ADDITION TO THOSE ALREADY SPECIFIED BY THE PCO);

3. ARRANGE FOR EXCHANGE OF TECHNICAL AND AUDIT INFORMATION AND COORDINATION BETWEEN THE CONTRACT ADMINISTRATION SERVICES AND AUDIT ACTIVITIES; AND

4. BE FULLY RESPONSIVE TO ANY REQUEST FOR TECHNICAL INFORMATION FROM THE AUDITOR.

WHEN PROVIDING PRICING SUPPORT TO THE PCO, THE PLANT REPRESENTATIVE OR ACO HAS THE PRIMARY RESPONSIBILITY FOR CONSOLIDATING AND EVALUATING THE FINDINGS OF THE PRICING TEAM MEMBERS AT THE CONTRACT ADMINISTRATION AND CONTRACT AUDIT OFFICES.

THE CONTRACT AUDITOR IS RESPONSIBLE FOR SUBMISSION OF INFORMATION AND ADVICE, BASED ON HIS ANALYSIS OF THE CONTRACTOR'S BOOKS AND ACCOUNTING RECORDS, AS TO THE ACCEPTABILITY OF THE CONTRACTOR'S INCURRED AND ESTIMATED COSTS. THE AUDITOR IS RESPONSIBLE FOR PERFORMING THAT PART OF THE REVIEW AND COST ANALYSIS WHICH REQUIRES ACCESS TO THE CONTRACTOR'S BOOKS AND FINANCIAL RECORDS SUPPORTING COST OR PRICING DATA. THE SCOPE AND DEPTH OF THE AUDIT IS THE RESPONSIBILITY OF THE CONTRACT AUDITOR. HOWEVER, THE AUDITOR SHALL ALSO ACCOMMODATE ANY SPECIFIC REQUEST MADE BY THE PCO. THE AUDIT REPORT SETS FORTH THE BASIS AND METHOD USED BY THE CONTRACTOR IN PREPARING THE PRICE PROPOSAL. ALSO, THE REPORT CLEARLY IDENTIFIES THE CONTRACTOR'S PROPOSAL AND

ALL SUBSEQUENT WRITTEN FORMAL SUBMISSIONS TO THE CONTRACTING OFFICER OR TO THE AUDITOR BY WHICH COST OR PRICING DATA WAS FURNISHED OR IDENTIFIED BY THE CONTRACTOR. IN ADDITION, COST OR PRICING DATA NOT SUBMITTED BY THE CONTRACTOR BUT OTHERWISE COMING TO THE AUDITOR WHICH HAVE A SIGNIFICANT EFFECT ON THE PROPOSED COST OR PRICE ARE ALSO DESCRIBED IN THE AUDIT REPORT. IF THE AUDITOR CONSIDERS THAT THE COST OR PRICING DATA SUBMITTED BY THE CONTRACTOR ARE NOT ACCURATE, COMPLETE AND CURRENT, OR THAT REPRESENTATIONS ARE UNSUPPORTED, THIS INFORMATION IS MADE KNOWN IN THE AUDIT REPORT. WHEN THE RESULTING OVERALL EFFECT OF THOSE DEFICIENCIES ON THE PROPOSED COST OR PRICE IS OF SUCH MAGNITUDE THAT THE USEFULNESS OF THE CONTRACTOR'S PROPOSAL IS CONSIDERABLY IMPAIRED AS A BASIS FOR NEGOTIATIONS, THE CONTRACTING OFFICER IS ADVISED PROMPTLY TO ENABLE CORRECTIVE ACTION TO PROCEED WITHOUT DELAY. THE CONTROL FEATURES IN OUR PROCEDURES DO NOT RELIEVE THE CONTRACTOR OF THIS OBLIGATION TO SUBMIT ACCURATE, COMPLETE AND CURRENT COST OR PRICING DATA.

THE AUDITOR'S COMPLETED REPORT SHALL BE SENT TO THE PLANT REPRESENTATIVE OR ACO FOR INCLUSION, WITHOUT CHANGE, IN THE FIELD PRICING REPORT TO THE PCO. THE FIELD PRICING REPORT THEN BECOMES A PART OF THE OFFICIAL CONTRACT FILE. SINCE THE CONTRACT AUDITOR IS INDEPENDENT ORGANIZATIONALLY FROM EITHER THE PLANT REPRESENTATIVE/ACO OR THE PCO, DETERMINES THE DEPTH AND SCOPE OF THE CONTRACT AUDIT, AND A COPY OF THE REPORT IS CONTAINED IN THE CONTRACT FILE, THIS PROVIDES A SIGNIFICANT INTERNAL CONTROL MECHANISM IN THE PROCUREMENT PROCESS.

IN ADDITION, DOD DIRECTIVE NUMBER 7640.2 (FORMERLY DOD DIRECTIVE 5000.42 ISSUED AUGUST 31, 1981) TITLED, "POLICY FOR FOLLOW-UP ON CONTRACT AUDIT REPORTS" PROVIDES A SYSTEM FOR (A) TRACKING AND REPORTING SPECIFIED TYPES OF CONTRACT AUDIT REPORTS: (B) A PROCEDURE TO REVIEW DIFFERENCES ON THE RESOLUTION OF CONTRACT AUDIT RECOMMENDATIONS: AND (C) AN EVALUATION OF THE EFFECTIVENESS OF THE DOD COMPONENTS' FOLLOW-UP SYSTEMS.

WHEN THE CONTRACTING OFFICER'S PROPOSED DISPOSITION OF CONTRACT AUDIT REPORT RECOMMENDATIONS DIFFERS FROM THE CONTRACT AUDITOR'S REPORT RECOMMENDATION IN PRENEGOTIATION OBJECTIVES FOR FORWARD PRICING ACTIONS, WHEN QUESTIONED COSTS TOTAL AT LEAST $500,000, AND UNRESOLVED DIFFERENCES BETWEEN THE AUDITOR AND CONTRACTING OFFICER TOTAL AT LEAST FIVE PERCENT OF THE TOTAL QUESTIONED COSTS: THE CONTRACTING OFFICER'S PROPOSED DISPOSITION SHALL BE BROUGHT PROMPTLY TO THE ATTENTION OF A DESIGNATED INDEPENDENT SENIOR ACQUISITION OFFICIAL OR BOARD FOR REVIEW. THIS SENIOR OFFICIAL OR BOARD WILL RECEIVE FOR REVIEW, ALONG WITH OTHER TECHNICAL MATERIALS, THE CONTRACT AUDITOR'S REPORT. THE OFFICIAL OR BOARD SHALL GIVE CAREFUL CONSIDERATION TO RECOMMENDATIONS OF THE AUDITORS, AS WELL AS THE RECOMMENDATIONS RENDERED BY OTHER MEMBERS OF THE CONTRACTING OFFICER'S TEAM, IN REVIEWING THE POSITION OF THE CONTRACTING OFFICER. THE OFFICIAL OR BOARD SHALL PROVIDE TO THE CONTRACTING OFFICER, WITH A COPY TO THE CONTRACT AUDITOR, A CLEAR, WRITTEN RECOMMENDATION CONCERNING ALL MATTERS SUBJECT TO REVIEW. AS A MATTER OF INFORMATION, THESE PROCEDURES ALSO APPLY TO ALL AUDIT REPORTS COVERING DEFECTIVE

PRICING, ESTIMATING SYSTEM SURVEYS, ACCOUNTING SYSTEM REVIEWS, INTERNAL CONTROL REVIEWS, COST ACCOUNTING STANDARDS NONCOMPLIANCE REVIEWS, AND OPERATIONAL AUDITS. ALSO INCLUDED ARE AUDIT REPORTS COVERING INCURRED COSTS, SETTLEMENT OF INDIRECT COST RATES, FINAL PRICING, TERMINATIONS, EQUITABLE ADJUSTMENT CLAIMS, HARDSHIP CLAIMS, AND ESCALATION CLAIMS IF TOTAL COSTS QUESTIONED EQUAL $50,000 OR MORE AND DIFFERENCES BETWEEN THE CONTRACTING OFFICER AND AUDITOR TOTAL AT LEAST FIVE PERCENT OF QUESTIONED COSTS.

THE AUDIT FOLLOW-UP REGULATION REQUIRES THAT THE CONTRACTING OFFICER PREPARE A MEMORANDUM COVERING THE DISPOSITION OF ALL AUDIT REPORTS. THE MEMORANDUM SHALL DISCUSS THE DISPOSITION OF ALL AUDIT REPORT RECOMMENDATIONS, INCLUDING THE UNDERLYING RATIONALE FOR SUCH DISPOSITIONS. IN THE EVENT A SENIOR OFFICIAL OR BOARD REVIEW WAS OBTAINED, THE MEMORANDUM ALSO SHALL DISCUSS THE DISPOSITION OF THE SENIOR OFFICIAL OR BOARD RECOMMENDATIONS. A COPY OF THE MEMORANDUM SHALL BE PROVIDED TO THE COGNIZANT CONTRACT AUDITOR AND TO THE SENIOR OFFICIAL OR BOARD MAKING THE REVIEW.

AFTER THE PROPOSAL EVALUATION PROCESS IS COMPLETED, THE NEXT STEP IS THE CONTRACT NEGOTIATION ITSELF.

CONTRACT NEGOTIATION PHASE. THE PRICE NEGOTIATION PHASE OF THE PROCUREMENT CYCLE IS GENERALLY THOUGHT TO INCLUDE ESTABLISHING THE PRICE OBJECTIVE, OBTAINING MANAGEMENT APPROVAL OF THE PRICE OBJECTIVE, CONDUCTING THE NEGOTIATION CONFERENCE, REACHING AGREEMENT ON PRICE, OBTAINING A CERTIFICATE OF CURRENT COST OR PRICING DATA, AND PREPARING A RECORD OF THE NEGOTIATIONS.

TO DEVELOP THE PRICE NEGOTIATION OBJECTIVE, THE PCO WILL START WITH THE COST VALUES INCLUDED IN THE CONTRACTOR'S PROPOSAL. THE ANALYSIS CONDUCTED DURING THE PROPOSAL EVALUATION PHASE SHOULD HAVE RESOLVED THE QUESTIONS OF FACT AND ALL DISAGREEMENTS ABOUT COST OR PRICING DATA. THE REMAINING AREAS OF DISAGREEMENT WILL BE IDENTIFIED AND THE DOLLARS AT ISSUE IDENTIFIED. THE DIFFERENCES THAT NOW EXISTS ARE THE DIFFERENCES OF OPINION AS TO WHAT WILL HAPPEN AND THE SIGNIFICANCE OF PARTICULAR FACTS. POINTS OF VIEW ASSERTED IN THE FINAL NEGOTIATION MAY STILL LEAD TO SOME CHANGES IN WHAT IS A FAIR AND REASONABLE PRICE, BUT THE RELATIVE POSITIONS ARE DEFINED FAIRLY WELL.

ONCE THE PCO ESTABLISHES THE PRICE NEGOTIATION OBJECTIVE, SOUND BUSINESS PRACTICE REQUIRES THAT THE CONTRACTING OFFICER OBTAIN APPROVAL OF THIS OBJECTIVE FROM MANAGEMENT. THIS STEP IS CONDUCTED SO THAT MANAGEMENT CAN BE ASSURED THAT THE CONTRACTING OFFICER HAS DONE A THOROUGH JOB OF SECURING AND EVALUATING COST OR PRICING DATA IN SUPPORT OF THE CONTRACTOR'S PROPOSAL AND IS ENTERING INTO NEGOTIATIONS WITH A WELL-CONCEIVED, REALISTIC AND FAIR PLAN.

THE NEGOTIATION OF CONTRACT PRICE USUALLY REQUIRES A DETAILED DISCUSSION WITH THE CONTRACTOR OF THE PROPOSED COSTS ON AN ELEMENT-BY-ELEMENT BASIS (MATERIALS, LABOR, INDIRECT COSTS, ETC.). IT DOES NOT, HOWEVER, REQUIRE THAT THE CONTRACTING OFFICER OBTAIN AN AGREEMENT WITH THE CONTRACTOR ON AN ELEMENT-BY-ELEMENT BASIS. FOLLOWING THESE DETAILED DISCUSSIONS, IN MOST

CASES, THE NEGOTIATIONS THEN CENTER AROUND THE REASONABLENESS OF THE TOTAL PRICE OF THE CONTRACT.

WHEN THE CONTRACT PRICE IS AGREED TO BY THE PARTIES, THE CONTRACTING OFFICER REQUIRES THE CONTRACTOR TO CERTIFY THAT THE COST OR PRICING DATA SUBMITTED ARE ACCURATE, COMPLETE AND CURRENT. THE CERTIFICATE OF CURRENT COST OR PRICING DATA SET FORTH IN FAR 15.804-4 IS USED FOR THIS CERTIFICATION. THE CERTIFICATE SIMPLY STATES, "THIS IS TO CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, COST OR PRICING DATA AS DEFINED IN FAR 15.801 SUBMITTED, EITHER ACTUALLY OR BY SPECIFIC IDENTIFICATION IN WRITING TO THE CONTRACTING OFFICER OR HIS REPRESENTATIVE IN SUPPORT OF THE PROPOSAL (DESCRIBE THE PROPOSAL, QUOTATION, REQUEST FOR PRICE ADJUSTMENT OR OTHER SUBMISSION INVOLVED, GIVING APPROPRIATE IDENTIFYING NUMBER, E.G., RFP $XXX) ARE ACCURATE, COMPLETE, AND CURRENT AS OF THE DATE WHEN PRICE NEGOTIATIONS WERE CONCLUDED AND THE CONTRACT PRICE WAS AGREED TO. THIS CERTIFICATION INCLUDES THE COST OR PRICING DATA SUPPORTING ANY ADVANCE AGREEMENTS AND FORWARD PRICING RATE AGREEMENTS BETWEEN THE OFFEROR AND THE GOVERNMENT WHICH ARE A PART OF THE PROPOSAL." THE RESPONSIBILITY OF THE CONTRACTOR IS NOT LIMITED BY THE PERSONAL KNOWLEDGE OF THE CONTRACTOR'S NEGOTIATOR IF THE CONTRACTOR HAD INFORMATION REASONABLY AVAILABLE AT THE TIME OF AGREEMENT, SHOWING THAT THE NEGOTIATED PRICE WAS NOT BASED ON ACCURATE, COMPLETE AND CURRENT DATA. SINCE THE CERTIFICATE PERTAINS TO "COST OR PRICING DATA," IT DOES NOT MAKE REPRESENTATIONS AS TO THE ACCURACY OF THE CONTRACTOR'S JUDGMENT ON THE ESTIMATED PORTION OF FUTURE COSTS OR

PROJECTIONS. IT DOES HOWEVER, APPLY TO THE DATA UPON WHICH THE CONTRACTOR'S JUDGMENT IS BASED. THIS DISTINCTION BETWEEN FACT AND JUDGMENT SHOULD BE CLEARLY UNDERSTOOD. I MIGHT NOTE HERE THAT DOD DOES NOT CONSIDER A CERTIFICATE OF CURRENT COST OR PRICING DATA A SUBSTITUTE FOR EXAMINATION AND ANALYSIS OF THE CONTRACTOR'S PROPOSAL. AS YOU WILL RECALL FROM MY EARLIER COMMENTS, OUR PROCEDURES REQUIRE THAT THE CONTRACTING OFFICER CONDUCT A COMPREHENSIVE REVIEW OF THE CONTRACTOR'S PRICE PROPOSAL AND THE SUPPORTING COST OR PRICING DATA.

AT THE CONCLUSION OF EACH NEGOTIATION OF AN INITIAL OR A REVISED PRICE, THE CONTRACTING OFFICER PREPARES A PRICE NEGOTIATION MEMORANDUM. THIS RECORD OF NEGOTIATIONS SETS FORTH THE PRINCIPAL ELEMENTS OF THE PRICE NEGOTIATION FOR INCLUSION IN THE CONTRACT FILE AND FOR THE USE OF ANY REVIEWING AUTHORITIES. THE MEMORANDUM IS PREPARED IN SUFFICIENT DETAIL TO REFLECT THE MOST SIGNIFICANT CONSIDERATIONS CONTROLLING THE ESTABLISHMENT OF THE CONTRACT PRICE. IT INCLUDES AN EXPLANATION OF WHY COST OR PRICING DATA WAS, OR WAS NOT, REQUIRED AND, IF IT WAS NOT REQUIRED, IN THE CASE OF A PRICE NEGOTIATION IN EXCESS OF $500,000, A STATEMENT OF THE BASIS FOR DETERMINING THAT SUCH DATA WAS NOT REQUIRED IS SET FORTH IN THE MEMORANDUM. IF COST OR PRICING DATA WAS SUBMITTED AND A CERTIFICATE OF COST OR PRICING DATA WAS REQUIRED, THE MEMORANDUM REFLECTS THE EXTENT TO WHICH RELIANCE WAS NOT PLACED UPON THE FACTUAL COST OR PRICING DATA SUBMITTED AND THE EXTENT TO WHICH THIS DATA WAS NOT USED BY THE CONTRACTING OFFICER IN DETERMINING HIS TOTAL PRICE OBJECTIVE AND

IN NEGOTIATING THE FINAL PRICE. WHEN FIELD PRICING SUPPORT IS FURNISHED, THE CONTRACTING OFFICER FORWARDS COPIES OF THE MEMORANDUM TO THE COGNIZANT ACO AND AUDITOR.

UP TO THIS POINT MY COMMENTS HAVE BEEN DIRECTED TO THE PRICING REQUIREMENTS, BEGINNING WITH THE ISSUANCE OF THE REQUEST FOR PROPOSAL AND CONTINUING THROUGH THE PROCUREMENT PROCESS UNTIL CONTRACT AWARD. THE NEXT PHASE THAT I WILL DISCUSS IS THE POST-AWARD PHASE WHICH INCLUDES THE GOVERNMENT'S REMEDY IN THE EVENT IT IS FOUND THAT COST OR PRICING DATA WAS NOT ACCURATE, COMPLETE AND CURRENT AS STIPULATED BY THE CERTIFICATE OF CURRENT COST OR PRICING DATA. IF CERTIFIED COST OR PRICING DATA ARE SUBSEQUENTLY FOUND TO HAVE BEEN INACCURATE, INCOMPLETE OR NONCURRENT AS OF THE EFFECTIVE DATE OF THE CERTIFICATE, THE GOVERNMENT IS ENTITLED TO AN ADJUSTMENT OF THE NEGOTIATED PRICE, INCLUDING PROFIT OR FEE, TO EXCLUDE ANY SIGNIFICANT SUM BY WHICH THE PRICE WAS INCREASED BECAUSE OF THE DEFECTIVE DATA. THE CLAUSE IN FAR 52.215-22, "PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA" GIVES THE GOVERNMENT AN ENFORCEABLE CONTRACT RIGHT TO A PRICE ADJUSTMENT, THAT IS, TO A REDUCTION IN THE PRICE TO WHAT IT WOULD HAVE BEEN IF THE CONTRACTOR HAD SUBMITTED ACCURATE, COMPLETE AND CURRENT DATA. THE CLAUSE ALSO GIVES THE GOVERNMENT A RIGHT TO A PRICE ADJUSTMENT FOR DEFECTS IN COST OR PRICING DATA SUBMITTED BY A PROSPECTIVE OR ACTUAL SUBCONTRACTOR.

THE GOVERNMENT'S RIGHT TO REDUCE THE PRIME CONTRACT PRICE EXTENDS TO CASES WHEN THE PRIME CONTRACT PRICE HAS INCREASED SIGNIFICANTLY BECAUSE A SUBCONTRACTOR FURNISHED DEFECTIVE COST OR

PRICING DATA. IF ANY SUCH SUBCONTRACTOR DATA ARE SUBSEQUENTLY FOUND TO BE DEFECTIVE, THE PRIME CONTRACT IS SUBJECT TO PRICE ADJUSTMENT IN THE SAME MANNER AS WOULD BE THE CASE IF ANY OTHER COST OR PRICING DATA SUBMITTED BY THE PRIME CONTRACTOR PROVED TO BE DEFECTIVE.

A SIGNIFICANT FACTOR IN DOD'S IMPLEMENTATION OF P.L. 87-653, "TRUTH IN NEGOTIATION ACT," IS THE DOD POLICY THAT THE DEFENSE CONTRACT AUDIT AGENCY (DCAA) ESTABLISH AND CONDUCT A PROGRAM FOR REGULARLY PERFORMING SCHEDULED DEFECTIVE PRICING REVIEWS OF SELECTED CONTRACTS AND SUBCONTRACTS. AFTER DCAA PERFORMS A DEFECTIVE PRICING REVIEW OF A CONTRACT AND HAS REASON TO BELIEVE THAT DEFECTIVE DATA RESULTED IN A SIGNIFICANT INCREASE IN THE CONTRACT PRICE; THIS INFORMATION IS PROVIDED TO THE CONTRACTING OFFICER IN THE FORM OF AN OFFICIAL DCAA AUDIT REPORT.

THE NEXT STEP IN THE PROCESS IS FOR THE CONTRACTING OFFICER TO EVALUATE THE AUDIT REPORT TO DETERMINE IF THE GOVERNMENT IS LEGALLY ENTITLED TO A PRICE ADJUSTMENT.

IN ARRIVING AT A PRICE ADJUSTMENT, THE CONTRACTING OFFICER SHOULD, AFTER REVIEW OF THE RECORD OF THE CONTRACT NEGOTIATION, CONSIDER THE FOLLOWING:

1. THE TIME WHEN COST OR PRICING DATA WAS REASONABLY AVAILABLE TO THE CONTRACTOR. CERTAIN DATA SUCH AS OVERHEAD EXPENSES AND PRODUCTION RECORDS MAY NOT BE REASONABLY AVAILABLE EXCEPT ON NORMAL PERIODIC CLOSING DATES. ALSO, THE DATA ON NUMEROUS MINOR MATERIAL ITEMS EACH OF WHICH BY ITSELF WOULD BE INSIGNIFICANT MAY BE REASONABLY AVAILABLE ONLY AS OF A CUT-OFF

DATE PRIOR TO AGREEMENT ON PRICE BECAUSE THE VOLUME OF TRANSACTIONS WOULD MAKE THE USE OF ANY LATER DATA IMPRACTICABLE. FURTHERMORE, EXCEPT WHERE A SINGLE ITEM IS USED IN SUBSTANTIAL QUANTITY, THE NET EFFECT OF ANY CHANGES TO THE PRICES OF SUCH MINOR ITEMS WOULD LIKELY BE INSIGNIFICANT. CLOSING OR CUT-OFF DATES SHOULD BE INCLUDED AS A PART OF THE DATA SUBMITTED WITH THE CONTRACTOR'S PROPOSAL AND SHOULD BE UPDATED BY THE CONTRACTOR TO THE LATEST CLOSING OR CUT-OFF DATES, PRECEDING AGREEMENT ON PRICE, FOR WHICH SUCH DATA ARE AVAILABLE. THE CONTRACTING OFFICER AND CONTRACTOR ARE ENCOURAGED TO REACH A PRIOR UNDERSTANDING ON CRITERIA FOR ESTABLISHING CLOSING OR CUT-OFF DATES, AND TO THE EXTENT POSSIBLE, THE UNDERSTANDING SHOULD RELATE TO THE CONTRACTOR'S FORMAL ESTIMATING SYSTEM. NOTWITHSTANDING THE FOREGOING, SIGNIFICANT MATTERS ARE IMPORTANT TO CONTRACTOR MANAGEMENT AND TO THE GOVERNMENT AND ANY RELATED DATA WITHIN THE CONTRACTOR'S ORGANIZATION OR THE ORGANIZATION OF A SUBCONTRACTOR OR PROSPECTIVE SUBCONTRACTOR WOULD BE EXPECTED TO BE CURRENT ON THE DATE OF AGREEMENT ON PRICE AND, THEREFORE, WILL BE TREATED AS REASONABLY AVAILABLE AS OF THAT DATE. ALTHOUGH CHANGES IN THE LABOR BASE OR IN PRICES OF MAJOR MATERIAL ITEMS ARE GENERALLY SIGNIFICANT MATTERS, NO HARD AND FAST RULE CAN BE LAID DOWN SINCE WHAT IS SIGNIFICANT CAN DEPEND UPON SUCH CIRCUMSTANCES AS THE SIZE AND NATURE OF THE PROCUREMENT.

2. IN THE ABSENCE TO THE CONTRARY, THE NATURAL AND PROBABLE CONSEQUENCE OF DEFECTIVE DATA IS AN INCREASE IN THE CONTRACT PRICE IN THE AMOUNT OF THE DEFECT PLUS RELATED INDIRECT COSTS AND

PROFIT OR FEE; THEREFORE, UNLESS THERE IS A CLEAR INDICATION THAT THE DEFECTIVE DATA WERE NOT USED, OR WERE NOT RELIED UPON, THE CONTRACT PRICE SHOULD BE REDUCED IN THAT AMOUNT. IN ESTABLISHING THAT THE DEFECTIVE DATA CAUSED AN INCREASE IN THE CONTRACT PRICE, THE CONTRACTING OFFICER IS NOT EXPECTED TO RECONSTRUCT THE NEGOTIATION BY SPECULATING AS TO WHAT WOULD HAVE BEEN THE MENTAL ATTITUDES OF THE NEGOTIATING PARTIES IF THE CORRECT DATA HAD BEEN SUBMITTED AT THE TIME OF AGREEMENT ON PRICE.

3. IN DETERMINING THE AMOUNT OF AN ADJUSTMENT, THE CONTRACTING OFFICER SHALL CONSIDER ANY UNDERSTATED COST OR PRICING DATA SUBMITTED IN SUPPORT OF PRICE NEGOTIATIONS FOR THE SAME PRICING ACTION (E.G., FOR THE INITIAL PRICING OF THE SAME CONTRACT OR FOR PRICING THE SAME CHANGE ORDER), UP TO THE AMOUNT OF THE GOVERNMENT'S CLAIM FOR OVERSTATED COST OR PRICING DATA ARISING OUT OF THE SAME PRICING ACTION. SUCH OFFSETS, HOWEVER, NEED NOT BE IN THE SAME COST GROUPINGS (E.G., MATERIAL, LABOR OR OVERHEAD).

4. THE CONTRACTING OFFICER SHALL ALSO COMPLY WITH THE REQUIREMENTS OF DOD DIRECTIVE 7640.2 IN RESOLVING DEFECTIVE PRICING AUDIT REPORTS (REFER TO THE COMMENTS UNDER "PROPOSAL EVALUATION EFFORT" OF THIS DOCUMENT FOR A MORE DETAILED DESCRIPTION OF THE REQUIREMENTS OF CONTRACT AUDIT FOLLOW-UP REGULATIONS).

WHEN THE CONTRACTING OFFICER CONCLUDES THAT DEFECTIVE PRICING EXISTS, A CONTRACT PRICE ADJUSTMENT IN THE AMOUNT BY WHICH THE DEFECTIVE DATA CAUSED AN INCREASE TO THE CONTRACT PRICE, IS REQUESTED OF THE CONTRACTOR. IF THIS IS NOT ACCEPTED

BY THE CONTRACTOR AND THE CONTRACTOR FURNISHES ADDITIONAL INFORMATION THAT MAY NOT HAVE BEEN AVAILABLE TO THE CONTRACTING OFFICER IN REACHING HIS POSITION ON THE DEFECTIVE PRICING, THE CONTRACTING OFFICER WILL NORMALLY ATTEMPT TO NEGOTIATE A FAIR AND EQUITABLE SETTLEMENT WITH THE CONTRACTOR. AS IS THE CASE WITH MANY TYPES OF DISAGREEMENTS BETWEEN TWO PARTIES, THE UNDERLYING FACTS ARE NOT ALWAYS CLEARLY TO THE ADVANTAGE OF EITHER PARTY. IF THE PARTIES ARE UNABLE TO ARRIVE AT A MUTUALLY SATISFACTORY SETTLEMENT, THE CONTRACTING OFFICER WILL ISSUE A FINAL DECISION ON THE CASE. THE CONTRACTOR THEN HAS THE OPTION OF ACCEPTING THE FINAL DECISION OF THE CONTRACTING OFFICER'S STATED PRICE ADJUSTMENT OR MAY APPEAL THE DECISION TO THE ARMED SERVICES BOARD OF CONTRACT APPEALS OR FILE A SUIT AS PROVIDED BY THE CONTRACT DISPUTES ACT OF 1978 (P.L. 95-563). ISSUANCE OF A FINAL DECISION WITH THE POSSIBILITY OF SUBSEQUENT LITIGATION IS SOMETHING THAT IS NOT DONE IN DOD WITHOUT CAREFUL ANALYSIS AND JUDGMENT. WE RELY VERY HEAVILY ON OUR LEGAL COUNSEL THROUGHOUT THIS ENTIRE PROCESS. OFTEN TIMES, COUNSEL ADVISES THE PCO THAT IT WOULD BE IN THE BEST INTERESTS OF THE GOVERNMENT TO NEGOTIATE A SETTLEMENT RATHER THAN TO LITIGATE THE ISSUE DUE TO THE FACTS AND CIRCUMSTANCES INVOLVED IN THE CASE.

ONCE THE DEFECTIVE PRICING CASE IS SETTLED, OUR REGULATIONS REQUIRE THE CONTRACTING OFFICER TO PREPARE A MEMORANDUM ON THE AUDIT REPORT INDICATING HOW THE ISSUE WAS RESOLVED. A COPY OF THE MEMORANDUM IS FORWARDED TO THE AUDITOR ISSUING THE AUDIT REPORT AND TO THE COGNIZANT ADMINISTRATIVE CONTRACTING OFFICER.

BEFORE I CONCLUDE MY COMMENTS, I WOULD LIKE TO BRIEFLY TOUCH ON THE ACTIVITIES OF THE ARMED SERVICES BOARD OF CONTRACT APPEALS (ASBCA). THE BOARD ADJUDICATES CLAIMS RELATED TO CONTRACTS TO WHICH A MILITARY DEPARTMENT OR DEFENSE AGENCY IS A PARTY. THE BOARD, CONSTITUTED PURSUANT TO THE CONTRACT DISPUTES ACT OF 1978 OPERATES UNDER A CHARTER GRANTED JOINTLY BY THE SECRETARY OF DEFENSE, THE SECRETARY OF THE ARMY, THE SECRETARY NAVY, AND THE SECRETARY OF THE AIR FORCE. MEMBERS OF THE BOARD ARE ADMINISTRATIVE JUDGES WHO ARE CAREER CIVIL SERVANTS AND WHO ARE SELECTED ON THE BASIS OF MERIT FROM A REGISTER OF CANDIDATES FOR BOARDS OF CONTRACT APPEALS. THIS REGISTER SHALL CONSIST OF ATTORNEYS AT LAW WHO HAVE BEEN QUALIFIED IN THE MANNER PRESCRIBED BY THE CONTRACT DISPUTES ACT OF 1978. NOMINATIONS OF CANDIDATES FOR THE ASBCA ARE MADE BY BOARD MEMBERS FROM THIS REGISTER. NOMINATIONS ARE SUBMITTED THROUGH THE DEPARTMENT OF DEFENSE GENERAL COUNSEL TO THE APPOINTING OFFICIALS. AUTHORITY FOR MAKING THESE APPOINTMENTS WITHIN OSD WAS DELEGATED BY THE BOARD'S CHARTER TO THE USDRE AND TO THE ASSISTANT SECRETARIES OF THE MILITARY DEPARTMENTS RESPONSIBLE FOR PROCUREMENT. UNDER THE CHARTER, THE CHAIRMAN AND VICE CHAIRMAN ARE APPOINTED OR REAPPOINTED FOR TWO-YEAR TERMS. REAPPOINTMENT IS CUSTOMARY. THE ASBCA CHARTER PROVIDES THAT THE BOARD SHALL HAVE ALL POWERS NECESSARY AND INCIDENT TO THE PROPER PERFORMANCE OF ITS DUTIES. THE BOARD ADOPTS ITS OWN METHODS OF PROCEDURE, AND RULES AND REGULATIONS FOR ITS CONDUCT AND FOR THE PREPARATION AND PRESENTATION OF APPEALS AND ISSUANCE OF OPINIONS. IT IS THE DUTY AND OBLIGATION OF THE MEMBERS OF THE ASBCA TO DECIDE APPEALS ON THE RECORD OF THE APPEAL TO THE BEST OF THEIR KNOWLEDGE AND ABILITY IN ACCORDANCE WITH APPLICABLE CONTRACT PROVISIONS AND IN ACCORDANCE WITH LAW AND REGULATIONS PERTINENT THERETO.

MR. CHAIRMAN, THIS CONCLUDES MY STATEMENT.

Senator **Proxmire**. Thank you very much, Mr. Kendig, and I want to tell you that I appreciate your response to my question because it was far better than the prepared statement. I think it was responsive. I don't necessarily agree with what you said.

You started by saying that one reason why these costs are so high is because the R&D is so high, research and development. After all, if you spend $1 million or so developing a system and you need very few of them, you have to allocate that $1 million and the unit cost becomes very high.

The point is that that's not what Mr. Fitzgerald, Mr. Amlie, Mr. Parfitt, and others who were with him were talking about. They're talking about recurring labor and overhead. They are not talking about R&D.

Mr. **Kendig**. Yes, sir. I understand that.

Senator **Proxmire**. So that what they were doing in the information they gave us, which was made available to you, was to break down the labor costs per standard hour and then go through each of the additions. And there's no addition here for R&D.

Mr. **Kendig**. No, sir. I spoke a moment ago about two different reasons, one being the development and the allegation on the $100,000 TV set, and the second one when I spoke about the cost accounting system that requires a sustaining engineering and other costs must be applied equally to everything that goes through the system.

Now when we speak about spare parts, that's where I'm talking about the sustaining engineering, which is included in the cost, as I understand it, in the figures presented by Mr. Fitzgerald.

Senator **Proxmire**. Is Mr. Amlie here?

TESTIMONY OF THOMAS AMLIE, SPECIAL ASSISTANT FOR TECHNICAL SYSTEMS, OFFICE OF THE COMPTROLLER OF THE AIR FORCE

Mr. **Amlie**. Yes, sir.

Senator **Proxmire**. Mr. Amlie, will you come up and sit next to Mr. Hahn over here? I've got a question for you before I get to Mr. Hahn, Mrs. Chelimsky, and Mr. Kendig. Mr. Amlie was here yesterday, as we know.

Mr. Amlie, Mr. Kendig explained the relative costs of TV sets and coffeemakers on the basis of engineering development costs and number of units purchased and so forth.

Can you respond to that in regard to the price markups presented to us yesterday?

Mr. **Amlie**. Well, I think you've already made a correct statement, Senator, that the $100,000 that Mr. Fitzgerald cited definitely did not include any development costs. It strictly would have been production costs.

Senator **Proxmire**. That's on the TV set, the $100,000 it would cost to build a TV set?

Mr. **Amlie**. Yes, sir. And further, the quality control at that time was so bad that the TV set probably would not have worked.

Senator **Proxmire**. You paid $100,000 for a turkey?

Mr. **Amlie**. Yes, sir.

Senator PROXMIRE. Will you stay where you are because we have some other questions we'd like to ask you as we go along.

Mr. Hahn, yesterday we were told that the Defense Department is paying 6 of the largest 10 contractors an average of about $135 per standard labor hour of work content and that it often pays $300 per hour or more.

How do you react to these figures and how do you explain the fact that your members charges so much less?

Mr. HAHN. I think they are ridiculously high, number one; and I explain the fact that our members charge so much less by the fact that they have to compete for business and there is an intense competition in an industry with 14,000 companies. We did an industry survey of operating costs and the average profits, and in good and bad years it averages around 5 or 6 percent.

The difference between the two is, our members have to compete to get business and most of these prices that you see are associated with sole source contracts and, indeed, from what I have seen in working on this subject for the last 2 to 3 years, there is a correlation between prices and the method of contracting and that is the high prices are almost invariably—and I can't think of an exception—associated with sole source contracts and more reasonable prices occur when you have competitive contracts.

Senator PROXMIRE. Now, Mr. Hahn, are the figures you cite for your members—that is the $32 and $51 per hour—equivalent to the standard labor hour cost cited by Mr. Fitzgerald? That is, do they include all the direct labor and overhead costs that go into defense contractor markups?

Mr. HAHN. That is correct, and a standard labor hour is really sort of a fancy word or term for how much an efficient worker can produce in 1 hour of work. It's a chief tool of those who predict costs based on the amount of work you do.

Senator PROXMIRE. You say that the firms in your group earn profits in the 5- to 6-percent range. This also contrasts sharply with the profit cited yesterday that appeared to average in the 12- to 15-percent range. That is for the big firms.

Were your firms able to do well with the lower profits and would they work for the Defense Department for that amount?

Mr. HAHN. Well, they would be happy to and part of our effort obviously is to get more work out there for our members because they would like to have the opportunity to bid on this work and not only, by the way, would it save $8 billion or better perhaps every year in spare parts, it would also greatly help our country by expanding our defense industrial base.

Senator PROXMIRE. Mrs. Chelimsky, as you know, I asked the General Accounting Office to inquire into the reasons for defense production delays, cost increases, and quality problems, and I find the results of your investigation shocking in many ways.

For example, would you explain what you mean by "slaving"? That's kind of a rough term. You have a definition here but I think you use it and use it effectively and I think it would be helpful for you to define slaving in defense production and how it was used in, say, the production of the M-1 tank?

Mrs. CHELIMSKY. Yes. It's the taking of an important component from say, an existing tank—or from a small stock of these components kept particularly for this purpose—to build around that component. In other words, you use some important component that's missing that you haven't got enough of in order not to halt production entirely. You take that and you build your new tank around that and that's called slaving. It's an expensive practice.

Senator PROXMIRE. Does that mean the finished tank has a missing part?

Mrs. CHELIMSKY. Exactly—well, somebody is going to have a missing part at some point because all of them are not there. They're using existing parts to build around them for the new tanks in order not to stop production.

Senator PROXMIRE. And they do that over and over again. What's the consequence of that?

Mrs. CHELIMSKY. It's just an extraordinary thing. It's been going on for 5 years for the M-1 tank, I can't give you any monetary consequence because we didn't look at that. That was not the object of the study.

Senator PROXMIRE. Does that kind of practice exist in the production of other products? Can you cite an example and indicate how common the practice is?

Mrs. CHELIMSKY. I don't know. You see, we had a case study design. We looked at six systems. But our folks may perhaps know something about that.

Senator PROXMIRE. So you end up with a parking lot full of tanks with missing parts in each so you become able to function, is that the case?

Mrs. CHELIMSKY. I think the idea is that at some point there's a kind of an echelon arrangement whereby little by little the things get filled up so I don't think you have a parking lot full of them, but I think you've got a tail end of the ones that have not been filled up.

It is a kind of scheduling sequencing problem that adds to the cost.

Senator PROXMIRE. Mr. Kendig, first, would you identify the folks who are with you, behind you?

Mr. KINDIG. Yes. I have with me Mr. Pete Bryan of my office, he is the program manager for pricing; and I have Judy Moorehouse, also from my office, she's a program manager for cost accounting standards and for independent research and development.

Senator PROXMIRE. Thank you, sir.

Now how do you reconcile the relatively low markup cited by Mr. Hahn for the small firms and the high markups cited by Mr. Fitzgerald yesterday for the six big defense contractors?

Mr. KENDIG. Well, I have to look first at the information that I understand was presented to you by Mr. Fitzgerald and when I look at that I notice on one of the examples, page 1 of 2, we have research and engineering, we have engineering burden, we have manufacturing engineering planning. These are the items that I was talking about that if you're in one of these contractor's locations that under the cost accounting standards, if you were to put something together like this, that all these costs would have to be taken into consideration and it seems to me that they have been.

Now this is at odds with what was just said when they said that it didn't include the research and engineering. So going by what I have here, if I misunderstand——

Senator **Proxmire**. I didn't say engineering. I said research and development.

Mr. **Kendig**. Well, I spoke about the sustaining engineering and I also spoke about the development. These are two parts to this thing and I attempted to give a demonstration of something using development costs and then I spoke about what was required by cost accounting standards and how everything had to be costed the same way. If you were to take something and put together a standard hour of this type, this is why I was referring to the sustaining engineering.

Now this is a significant portion of what we're talking about. Now if the meaning of these words are somewhat different than the normal understanding that we would have, I would have to say that I will submit for the record if you wish a further explanation or an explanation, but I could only prepare myself by what the common understanding of these words were.

But then addressing the next question, why is it——

Senator **Proxmire**. Before you get into the next question, let me have Mr. Amlie answer this one. Go ahead, Mr. Amlie.

Mr. **Amlie**. Well, Mr. Kendig is right in that sustaining engineering is a cost. The problem is, we don't want sustaining engineering. They charge us for it anyway. At the Hughes Tucson plant, there are 6,500 employees of whom only 1,200 are production workers. The rest is an army of engineers running around with red pencils screwing things up and they change things and that's one of the reasons why they got into trouble recently. Everybody was running around making changes and not telling other people. And that's supposed to be, Senator, a production facility. The things they manufacture are engineered at other places.

So Mr. Kendig is right, they do charge us for it, but we shouldn't pay it. We don't want it.

Senator **Proxmire**. Go ahead with your second point, Mr. Kendig. Thank you, Mr. Amlie.

Mr. **Kendig**. Well, sir, I don't know what is meant there by we don't want the sustaining engineering. The sustaining engineering, if things are being done properly, is a necessary part of producing any weapons system.

But addressing the question of why then are the small businesses able to have standard hours which are substantially less than those which were presented by Mr. Fitzgerald, the answer to that is——

Senator **Proxmire**. I'm sorry. Let me just interrupt to say that I'm looking here at the direct labor costs for standard hour $15.90 that ended up $122.49. Engineering, when I add up everything that's labeled engineering here, adds only about $5 or $6 to the $122 cost.

Mr. **Kendig**. There are different sheets. The one that I happen to have in front of me was labeled page 1 of 2 and it speaks of manufacturing, fabrication at $14.70 and research and engineering at $17.51.

Senator **Proxmire**. What is the total charge?

Mr. **Kendig**. The total charge on this sheet is——

Senator **Proxmire**. Per hour?

Mr. **Kendig**. Per hour—it's got a second sheet to it. This is the one that came up with $70 as a total cost.

Senator **Proxmire**. Now that's the best case for your position.

Mr. **Kendig**. I'll take any one you want.

Senator **Proxmire**. The others are a lot less. Go ahead.

Mr. **Kendig**. The principle being the same on all the sheets.

Now to get to the question of why the small business people are capable of having a rate that they do have is basically that what we are talking about are those parts which somebody has designed and has said this is the part that we want. It does not require this engineering.

Now there are two things that could be done. One is that we could go in and make some changes in the accounting system at the prime contractor location. I think it would require some changes to the cost accounting standard rules to do it, and say, OK, if something is going through as a spare part, we will not permit the allocation of these sustaining engineering costs and things of this type to that kind of work.

Senator **Proxmire**. Well, isn't it true that Mr. Hahn's people who charge $30 to $50 an hour instead of the $100 to $300 an hour have exactly the same costs—engineering and everything else; they're doing exactly the same work, but they charge one-third or less of what the big contractors charge?

Mr. **Kendig**. It's a matter of how the cost is applied, sir, is what I'm trying to say. I agree that he has those kinds of costs. he does not incur at his company the kind of research and engineering costs that is incurred at the major contractor locations. And if it was decided that——

Senator **Proxmire**. Well, it seems to me, except for the nonrecurring overall R&D costs that aren't included here, that the point Mr. Amlie makes it right. Mr. Hahn says that they can do the job. They can do it to specifications. They can do quality work. All they want is to be able to compete and if they can compete they can do it at one-third the labor costs that you're paying to the big defense contractors.

Mr. **Kendig**. I'm not sure whether the big contractors, because of their size and all the other things that they have, would ever really be able to get down to the $30 of the small businessman.

Senator **Proxmire**. Then why not let a small businessman do it?

Mr. **Kendig**. Sir, we are on a major program to break out the parts that can be broken out and we intend to do that. However, if you ask me why the costs—this is what I was trying to give you an explanation for—why the cost is where it is, again I'm saying——

Senator **Proxmire**. We had it 17 years ago, in 1967, on breakout. We're still working on breakout and we still don't have it. We still have these small business people who are efficient and who will do the job and do it to specification, and they get a tiny fraction of what the big defense contractors get because they can't compete. They're not allowed to compete because you negotiate so much of this.

Mr. **Kendig**. I can only say to you, sir, that we in the Department agree that there must be more breakout and that there is right now a major effort, the biggest effort that the Department of Defense has ever made, to accomplish this breakout.

Senator PROXMIRE. Could I ask you, Mr. Hahn, will you respond to the efforts the Defense Department is making to break it out and to give small defense contractors an opportunity to bid competitively?

Mr. HAHN. I guess I would respond by stealing a quote by somebody else—"Where's the beef?" We had our fall conference where we did this survey October 1 through 5 and there were approximately 400 members at the conference. The big priority of this was I spent a lot of time asking around and I didn't make any scientific tabulation as to how many people are seeing a lot more jobs from the Department of Defense and are getting more work out of the Department of Defense. It's not there yet, I can tell you that. Maybe one or two might have picked up a job or two, but it's not out there.

I would also say, for your information, we were invited to Tinker Air Force Base which is one of the aerodistrict centers where a lot of spare parts are procured subsequent to Secretary Weinberger's issuance of his plan to increase competition and I spoke to some people at the buying level, people out there who are actually buying from the companies. We do not believe that those points—we do believe they were well intended, but we do not believe they addressed the real problems.

We do not believe that they would have much effect and several of the people who were actually buyers agreed with us. They said that they did not see those new rules as increasing competition.

Senator PROXMIRE. Now Secretary Weinberg has taken some initiatives to increase competition. Have these efforts been effective so far as spare parts procurement is concerned?

Mr. HAHN. Well, no, they haven't.

Senator PROXMIRE. Why not?

Mr. HAHN. I don't think their potential even fully implemented—I realize they probably haven't been yet—will increase open competition in the procurement of spare parts significantly. If it's 20 percent now, it's arguable because we have seen a number of different figures——

Senator PROXMIRE. Why not?

Mr. HAHN. Well, there are simply too many barriers to competition that were not addressed by Secretary Weinberger's memo.

Senator PROXMIRE. Mr. Kendig, what's your response to Mr. Fitzgerald's estimate that 30 percent of the procurement budget could be saved if excessive price markups were prevented, and do you deny that such large savings are possible?

Mr. KENDIG. Sir, I don't really know, based on Mr. Fitzgerald's statement, what his basis is for that 30-percent reduction except for perhaps a statement that has just been made a moment ago where they are saying that we really shouldn't be paying for this sustaining engineering. Now if I look at the figures here and if that's what he's really talking about, then the question comes up about what is sustaining engineering and does it add a value to our weapons system and to the items that we are buying.

Now, I'm given to understand from the technical people——

Senator **Proxmire**. Sustaining engineering, no matter how you define it, doesn't come close to adding up to this difference. Engineering at the very most is about 15 or 20 percent of the cost here, as Mr. Fitzgerald has it—and you can dispute his figures and show us why you think it should be higher—in most of these cases it's about 5 percent or less. That is the engineering. I'm not talking about the R&D engineering which you agree is not included here. I'm talking about the sustaining engineering that we have during the process and according to all the figures we have here, the hard figures, that so-called sustaining engineering is a small fraction. It doesn't explain it and that's the only element that you take here.

Mr. **Kendig**. Well, the think is, sir, that he does not and has not done in the past, at least in the things I have seen, detailed what cost it is that he actually thinks can be eliminated to achieve this 30 percent. If I had that I could give you a better response.

I did understand that yesterday he made statements about certain entertainment costs and things of this type which are actually not allowable under our contracts. So if they are not allowable, they are not items that are charged, so I can't see how they could be contributing to this 30 percent that he's talking about.

I would have to agree that if everybody did everything that they could as well as they could, that there is always room for improvement and reduction, and I think that we again are trying to work on that. I do not believe that there is a possibility for a 30-percent reduction in that cost. There is always room for some reduction. I don't think it's 30 percent.

Senator **Proxmire**. Well, Mr. Hahn seems to be offering a 50-percent reduction if you'd just let them bid. Their costs are that much less.

Mr. **Kendig**. Sir, we agree—I think that we both agree, you and I, that we have to have additional breakout for spare parts. We will have that breakout for the spare parts. It is a thing that is going to take a lot of people to do. The Department of Defense has had the approval for those people. They are in the process of hiring those people. They do not have them all on board yet. I do believe that those people will produce and then when we get to the spare parts items that there will be a significant portion of those spare parts that can be broken out, but even if you can break out all the parts, the possibility—let's assume that you could break out 30 percent of those spare parts. That will not produce a 30- or 50-percent reduction in our total spare parts procurement. It will produce that kind of reduction for that portion of it.

Senator **Proxmire**. Mr. Kendig, I've been on this committee for 20 years and before I came Senator Douglas was working on the same thing; we are still working on that breakout. Mr. Hahn has pointed out that the amount of procurement that the small defense contractors who will do it for far less, has been able to get, is a very, very small fraction of what we would expect them to get.

What was the proportion that you gave us, Mr. Hahn?

Mr. **Hahn**. Well, DOD figures say approximately 20 percent of the $22 billion that is procured through open competition.

Senator **Proxmire**. So 20 percent is open competition which is far less expensive.

Mr. Hahn. And our people do very well there. We win plenty of contracts in open competition. But for some reason they don't get sole source contracts.

Senator Proxmire. Even if you don't win it, the taxpayer gets a break because if the person who does win it is bigger than you are, they have to produce at a lower price.

Mr. Hahn. That's correct.

Mr. Kendig. Senator, I would like to repeat, we agree on the fact that it should be broken out and we do refer to the fact that years ago the same thing was there. I think that if we take one look at it, I don't think that the Department of Defense has ever gone out with the effort that they are going out with now. They are going out and they are going to hire somewhere around 6,000 people that are going to be devoted to this problem in the spare parts area, identifying these things, making sure that they are properly purchased. That's the whole thrust of what is going on.

I think that we have something different now than we have ever had before.

Senator Proxmire. Go ahead, Mr. Hahn.

Mr. Hahn. I'd like to make some suggestions to help Mr. Kendig and the people over at the Pentagon increase competition.

No. 1, I think there is too much combination of R&D projects with production in the area of spare parts. At some point in time you've got a part to buy. At that point in time, why not buy it through open competition, have your engineering go as a separate item but take it out in the field so that the lowest price wins the bid. You won't have to worry about all these other questions and cost accounting standards and every other thing.

No. 2, get rid of a few qualification systems, that is, quality control techniques used by the Department of Defense. They're called mil standards, mil specifications. Quality control is a statistical science. It involves the use of sampling, measuring, testing. The higher the quality level you want, the more sampling you can do. It's very simple and very scientific.

There are three qualification processes. They have a qualified product list and a qualified bidder list. What happens is after the Defense Department signs a contract for a major system they go to the person that build that system and say, "This part right here, is this a part that can be put out competitively or is this something that's very tough to make and probably only you have the special skill and we'll have to go back and buy it from you." They don't take any input from outside sources, independent sources. They don't take any input from small businessmen, so they can have their opinion as to whether or not they're capable of doing it, and there's an obvious incentive for the prime contractor to say, "yes, I don't think anybody else can do it, so I guess you're going to have to buy it sole source from me now and forever more."

Get rid of that system. That's arbitrary and has nothing to do with quality control.

Three, get your data base together. When we were out at Tinker Air Force Base, I forget what share it was, but a large portion—the data base is simply the blueprints that are needed to build these parts—is lost; it's illegible. It's been reproduced in some cases so many times you can't read it. Parts of it were missing. There is not a data base in the Department of Defense. They need badly to produce and build a data base.

Second, there aren't incentives for the actual buyers to increase competition. It has nothing to do with a job evaluation. We think it ought to be part of a person's job evaluation, to what extent has he increased competition in the procurement of spare parts.

Fourth, start verifying claims of proprietary data. There's a heck of a lot of data out there that is claimed to be proprietary. Now I'm sure there is legitimate proprietary data, but we have seen a lot of data for systems that we frankly can't possibly imagine a commercial application or the development of that data without Government funding and, to our knowledge, there has not ever been near enough verification of data.

Fifth, put in some frontend provisions in your original system contracts for either the purchase or the lease of limited rights for data for reprocurement purposes. Once you cede or once that is proprietary data, you've lost all control over the total cost of the system. The original cost, the original price becomes only your downpayment because you can only go back to the person that provided it because it's proprietary data or other reasons. You're stuck. You have no control over the cost.

When you look at original systems contracts, evaluate them on the basis of how much that data that's going to be supplied will be Government-owned data so that you can reprocure. Because if you have a much higher proportion of data that is owned by the Government, your downstream costs of supporting that system are going to be far less because you will be able to competitively bid. So don't just look at the frontend cost of one system versus another because the cheaper you can turn out to have five times as much proprietary data and you've lost all control over the prices.

Sixth, improve your communications. The Commerce Business Daily is not currently an effective means for a small businessman to learn about an opportunity.

For example, you include the parts number of spare parts that are being purchased. Many small businesses who now do their work for the Government, they do it indirectly as subcontractors. They get a set of prints and it doesn't have a part number on it. It's been obliterated. So they don't know whether that's a part that they have ever done before. Get some description of the part that's being produced and how long is it and how wide is it, is it cylindrical or what shape it is, because each one of these companies has a different configuration of equipment and can write for 50 different data packages and find out that 40 of them aren't suitable for his company. They're just not set up.

Second, the timeliness of those packages. We had one member, a former president of the association, who wrote in for something on the order of 50 data packages; 47, I think, he got after the bid submission deadline. Two of them he had less than a week, which is probably not an adequate time, and one of the 50 he had enough time to prepare a bid.

This has led, by the way, to the development of a cottage industry. There are companies out there who sell data packages to members of our association. There's a lot of concern about these companies because of the possibility of them letting data get into the wrong hands of other countries. The industry wouldn't exist if there was an effective vehicle to get that data in the hands of companies who could legitimately bid on it.

Senator **Proxmire**. Mr. Hahn, I want to thank you for this. I think this is exactly the kind of material that we should have and I'm going to ask that—we're going to send it to Secretary Taft and Secretary Weinberger and recommend that they study it carefully because I think it's the kind of recommendations that make sense, are practical, and I think that they could save the taxpayer a great deal of money.

Mrs. Chelimsky, your findings highlight a number of production problems. One is shortages of machinery in the production of four of the six weapon systems you examined. Tell us which four and how the contractors and the Defense Department explain the shortages and whether their effect is to incease production costs.

Would you like to have one of your colleagues come up to the table?

Mrs. **Chelimsky**. That's not the issue. It's a proprietary question, and I wanted to make sure this wasn't one of those.

Senator **Proxmire**. Do you want me to repeat the question?

Mrs. **Chelimsky**. We have the question and we also have the answer. The problem is, can we give it to you here. It's coming. They think I can answer so I will.

The four were TOW-2 missile, the M-1 tank, the F-100 engine, and Phoenix missile.

Senator **Proxmire**. All right. I want to know how the contractor or the Defense Department explained the shortages and whether their effect is to increase production costs.

Mrs. **Chelimsky**. This is Mr. Solomon who I introduced earlier.

Senator **Proxmire**. Your name is James Solomon?

Mr. **Solomon**. Correct.

Senator **Proxmire**. And your office?

Mr. **Solomon**. Program Evaluation and Methology Division in the General Accounting Office.

The first of these two questions is how do the defense contractors explain the shortage of production machinery.

Senator **Proxmire**. How they explain the shortages.

Mr. **Solomon**. Right. I guess in a rather straightforward manner, not very well. They say often, as I've heard many times today: "We're working on it. We're going to have more production machinery. We're doing the best we can. We have six presses coming next week." We check back and the presses aren't there yet. "We're going to get new testing equipment in August." It's not there yet.

The easy answer to the question that we ask is always, "We're thinking about it" or "We're doing something about it," but the actual evidence of that is not always so clear and straightforward.

Now with respect to what effect it might have on costs of a weapons system——

Senator **Proxmire**. Let me just interrupt to ask, is it because they don't care, that even if it does increase their costs they will be reimbursed by the Government no matter how much it costs? There's no incentive for them to have the machinery available?

Mr. SOLOMON. You asked two questions. The first is, do they not care? That's difficult for me to answer.

The second is the incentives, and I don't think the incentives are there for them to have to worry about those types of issues.

Senator PROXMIRE. So whether they care or not, there's no incentive there that would give them the stimulus to hold their costs down that they would normally have in a commercial transaction?

Mr. SOLOMON. Basically, what we have seen, looking at the case studies examined so far, is that over the course of time, unit costs increase for items and we see leadtime increase for items. Both of them have direct cost implications. We have not seen someone say, "Get the presses, pay the extra money. We're not giving you the extra unit cost. We're not going to let you take longer to make the weapons system." It's just sort of a general sense—every once in a while you get these general impressions when you're out in the field and I think this is one—that things will get done in time, but no one really worries how quickly things will get finished.

Senator PROXMIRE. Let me ask you, Mr. Solomon, why do you say there's no incentive?

Mr. SOLOMON. Because I haven't seen any actions taken in response to the deficiencies we found. The production constraints that we reported on to you today are production constraints you have heard before. The Ichord report had the same recommendations.

Senator PROXMIRE. Let me just interrupt to say that there are production constraints evern in an efficient firm sometimes. Every firm will run across a shortage of equipment. How do you differentiate this from an efficient firm operating with the normal incentives you would have in our system? Is there much greater and more commonly occurring absence of the necessary equipment and so forth?

Mr. SOLOMON. We didn't examine comparable commercial firms, so I can't answer it that way. I can only say that we did find a large number of production constraints. It was not an isolated instance.

Mrs. CHELIMSKY. Let me add something to that.

Senator PROXMIRE. Go ahead, Mrs. Chelimsky.

Mrs. CHELIMSKY. It seems to me also that we have a discipline in the private market that you aren't going to have when everybody is working for the Defense Department, which is the case with the prime contractors. So that it's not just a question of incentives. It's also a lack of sanctions. Neither the incentives are there nor the sense that something will happen if something isn't done.

Senator PROXMIRE. In your report you also found widespread shortage of testing equipment.

Mr. SOLOMON. That's correct.

Senator PROXMIRE. Does that increase production costs and how do the contractors and the Defense Department explain the shortages or were they aware of them before you did your study?

Mr. SOLOMON. Again, that's a good example of the problems. Once we explained it to the DOD officials, they said they were aware of them and the answer came back, "We're working on them."

Senator PROXMIRE. They were not aware of it?

Mr. SOLOMON. They were aware of it. And our next obvious question was, "Can't something be done?" And the answer comes back that "We're aware of the problem and we are trying to get additional testing equipment."

I think another production constraint that we found that's probably more relevant to the question at hand relates to Mr. Fitzgerald's testimony, which is the question of proprietary processes, and Mr. Hahn talked about that this morning. Virtually everywhere we went we found proprietary processes.

Now if you're going to have competition, what do you do when the process and data specs are proprietary to the contractor? You can start over and you can buy them back. We just saw that in the newspaper the other day with the GE and Pratt & Whitney engines.

That's a real problem and if you're looking for competition to bring costs down, it's a definite constraint to competition.

Senator PROXMIRE. Mr. Amlie, did you want to comment on that?

Mr. AMLIE. Senator, I have several comments.

First of all, I agree totally with Mr. Kendig that we are doing a lot better now. I started working on spare parts about 2 years ago and I got the strong impression that the Air Force was doing much better than the other services. The Navy was by far the worst. They were automatically going back to Pratt & Whitney and so forth.

Then Mr. Lehman appointed a very competent commodore and the Navy is doing a magnificent job. We in the Air Force are also trying and are doing a lot better.

Going competitive is very difficult. We rate our buyers on how much money they spend, how many buys they make in an hour. They have 24 minutes to make a buy. Going competitive can take a day. The buyer's rating and other promotions and everything is based on how much money he spends, not how much money he saves. It's our fault.

Senator PROXMIRE. That's a very, very interesting observation. How would you design a system that would provide an incentive for how much they save? How much they spend is pretty easy.

Mr. AMLIE. Well, when I was at Tinker Air Force Base several buyers told me they would work for no salary at all if they could keep 1 percent of what they save. That's not a bad idea.

Senator PROXMIRE. Would you advocate that?

Mr. AMLIE, Not strictly that. I would advocate fairly generous bonuses. It's a lot of work to go competitive and Mr. Hahn's statement about the data is just crucial. If we don't have the data, we are helpless.

The program manager—and I've been one—has to be the most harassed human being in the world, and buying paper is the farthest thing from his mind.

I think one thing the Congress might do is force us to fence off the money for data at the beginning of the first contract, because there's no incentive right now for the program manager to buy data. He's always out of money and he doesn't want to buy paper; he want to buy an extra engine or an extra missile or an extra something. So there ought to be some kind of strong binding regulation saying that we must buy the data, the funds identified, and fenced off so that people can't spend it for something else.

Senator **Proxmire**. How about the proprietary process?

Mr. **Amlie**. I have talked to our lawyers and I have found there is no such thing as a proprietary right. You can find a patent office in town and you can find a copyright office. You can't find a proprietary right office. There is such a thing as a trade secret, but that's because it's a secret, like Coca-Cola syrup. There is no such thing as a proprietary right.

Second, in almost all cases, we have paid several times over for the development of this data anyway.

Senator **Proxmire**. Well, the process can be secret, can it not? Is this just another term for the same thing?

Mr. **Amlie**. If it's a secret. But if anybody else knows it they can use it unless it's patented. There is really no such thing as a proprietary right and we are shooting ourselves in the foot by the way we do business.

I'd like to also comment—Mr. Kendig talked about sustaining engineering. That's only a small part of this monster we call overhead. In fact, some people call the defense industry the overhead industry because that's what they produce.

For instance, on the Pratt & Whitney TF-30 engine, a 20-year-old engine, for every dollar we pay a machinist to machine parts, we pay $2.20 for sustaining engineering, on a 20-year-old engine. We shouldn't do that. That's really the gist of my comments.

Senator **Proxmire**. Say that again. There's a 220-pereent cost——

Mr. **Amlie**. We pay a little over $2.00 a standard hour for machine shop work on the TF-30 engine parts. For every dollar's worth of machine shop—every dollar we pay a machinest for Pratt pays a machinist, we pay Pratt $2.20 for sustaining engineering. It's a 20-year-old engine. We're not making changes in it.

Senator **Proxmire**. Isn't that an outrageous markup?

Mr. **Amlie**. It's certainly not the worst.

Senator **Proxmire**. Why is it allowed?

Mr. **Amlie**. It's in the contract.

Senator **Proxmire**. Why is it in the contract?

Mr. **Amlie**. This is strange, Senator. This contract was negoitated for the Air Force by the Navy and I don't understand it either, but it's the exact example in the Parfitt report.

Senator **Proxmire**. I have one other question for Mrs. Chelimsky and then I'll yield to Congressman Scheuer.

Your report says that "slaving," which you define, is required when there are shortages of components. There are also shortages of raw material.

Can you indicate some examples of shortages of components and raw materials and explain why they exist?

Mrs. **Chelimsky**. Yes. We found that there was a great dependency on foreign sources and in many cases it was obvious that this was going to have to be the case for manganese, cobalt, graphite—those are the ones I remember. That obviously is going to be a problem for us, but it's a question of a production problem, not a cost problem.

The other thing you asked, the semiconductors and microelectronic components of all types—those are manufactured elsewhere and we use them, and that's something one could look at it seems to me.

Senator **Proxmire**. Congressman Scheuer.

Representative **Scheuer**. Thank you very much, Senator.

I want to thank all the witnesses for their most interesting testimony.

Mr. Kendig, you undoubtedly understand that we wouldn't have held these hearings if our perception of your problem in the Defense Department—again, I use the corporate "your"—was an occasional executive or an occasional official making a mistake of a penny an item that added up to $100 a contract. We wouldn't have had these hearings if our perception of the problem were that it was of that order of magnitude.

Yesterday we got a perception of the problem from the two officials from the Defense Department that was far different from that. They testified that they looked into six major companies and they found endemic, systemic problems of a vast order of magnitude in every single one of them.

In one of them—I believe it was one of those six—they found $1½ billion added cost to the contract for the cost of redoing work that was done improperly in the initial instance. I was absolutely flabbergasted that the taxpayer had to pay for having it done right the second time, but apparently that was the case.

They testified that of the roughly 100 billion dollars' worth of work annually that would fall under this rubric, one of them testified that they felt that savings in the order of magnitude of 30 percent could be effected and the other testifed that savings in the order of 50 percent of $100 billion could be effected.

So you're talking about savings on the order of $25 to $50 billion, not $100 a contract. So that's really a very different perception than the one I got from you. Now maybe I'm wrong.

How do you view the problem that we're talking about? Is it really one of occasional overrun of a penny an item adding up to $100 a contract, or is it the kind of problem that they spoke about yesterday? I'm not holding you down to whether it's a 20-percent saving on $100 billion or a 50-percent saving on $100 billion. As Senator Dirksen said once. "You save a billion here and a billion there, and pretty soon it begins to add up to real money."

There's an awful lot of money, according to this perception of the problem, being poured down the rathole. How do you look at it, and if you do perceive it as a systemic problem, an institutional problem, an endemic problem, what kind of structural changes, an endemic problem, what kind of structural changes do you contemplate to set the thing aright? What kind of a target can you give us, what kind of a yearly program could you give us where at the end of *x* number of months or years a new and better and improved system could be set in place that would provide the kind of fine-tuned oversight over this vast operation that everybody seems to want and that we don't seem to feel is there now?

I don't want to put words in your mouth. If you think the problem is one of a penny an item adding up to $100 a contract, then tell us.

Mr. **Kendig**. First, I'd like to correct any misconception that I might have given to you. When I spoke about the penny an item, the extent of the IG report—that is, the IG going out and came up with a definition of unreasonable which included items of that type. So when one looks at that report and sees the percentage of items that were overpriced under that definition, they seem rather large. And I was only trying to point out that the purpose of their report was to draw for us a complete picture. In other words, they didn't make a value judgment in those statements. they wanted to present the whole thing to management so management could make the decision. And I think that was proper for the purpose for which the report was being written.

So I'm not suggesting to you that I believe or the Department believes that we are talking about a penny an item here or a penny an item there.

Representative **Scheuer**. I'm asking you, how does the Department perceive this problem and what kind of plans does the IG have or the Secretary have or you have to make the kind of fundamental institutional organizational changes that will really make inroads on the kind of problem that we discussed yesterday and that you've heard both the Senator and I express concern about this morning?

Mr. **Kendig**. Yes, sir. On the other side, the question comes up, it is a $30 to $50 billion potential. And in my opinion, after all the years that I've had in the Department of Defense and the places where I've worked and the things that I've done, my answer to you there is, it is not that magnitude.

Representative **Scheuer**. What magnitude is it, in your opinion?

Mr. **Kendig**. Well, the magnitude that we are speaking about, when we look at this and when I look at the efforts that the Department of Defense has already initiated, it's going to be in the area of probably somewhere of 5 percent or less, in my opinion, sir.

Representative **Scheuer**. So you're talking about $5 billion?

Mr. **Kendig**. If everything were to go as well as we could make them, there could be a reduction and I believe that is the intent of the program that has been put forth by the administration.

Now I will furnish for the record—I know that it's been furnished to other committees—a complete list of all the initiatives that have been taking place over the past year, the six major points that Secretary Weinberger has put out, and I believe these items will result in the savings that can be achieved.

Representative **Scheuer**. Do you feel that with all of the suggestions that have been made by the Department and which you're going to list for us that a system is now in place that will work, and is it as efficient as we are capable of making it?

Mr. **Kendig**. Sir, the system is being put in place. It is not all in place. One of our major problems and the major problems of anybody is to get all the people that we need to do the job, to get them in there and get them trained, and to get them to do it.

A part of the problem—and I think we all recognize it—is that some of our initiatives are those that depend on proper contracting, having the ability to have multiyear contracts. This, of course, requires the cooperation of Congress. And in the agreement, when the Department suggests that a particular weapon system should go under the multiyear system, it requires the agreement of Congress. Congress has to agree with us. If they don't, and in their judgment we were wrong in suggesting it, then we can't use that initiative in that case. But it's not something that I believe that the Department can do completely by itself. It is something that we have to have your cooperation on.

[The following information was subsequently supplied for the record:]

SIX MAJOR DOD INITIATIVES

The Deputy Secretary of Defense is personally sponsoring six major initiatives to improve the acquisition process. Briefly, these are:

(a) *Program stability.*—This initiative is designed to increase the stability of weapon systems acquisition by adequately funding R&D and procurement in order to maintain established baseline schedule and reduce cost growth.

(b) *Multiyear procurement.*—This is designed to reduce the cost of mature, low-risk weapon programs already in production by funding economical lot buys instead of small piecemeal, annual buys (same examples for FY 1985 are F-16, M-1, TOW, UH-60A).

(c) *Economic (stable) production rate.*—This initiative involves buying weapon systems at a rate that assures economical production and reduces unit cost.

(d) *Realistic budgeting.*—This initiative is designed to achieve realistic defense acquisition budgets, reduce apparent cost growth in weapons systems, and achieve greater program stability.

(e) *Improved readiness and support.*—This initiative involves establishing readiness objectives for each weapons development program and then designing in reliability and maintainability.

(f) *Encouraging competition.*—This initiative is designed to enhance competition in the acquisition process in order to reduce cost.

Representative **SCHEUER**. Well, yes, and we hope that you will give us a laundry list of things that Congress can do, of ways that Congress can help, and if a multiyear contract would help and sometimes we think that multiyear enabling legislation and funding legislation would help—tell us and give us the kind of examples that you're thinking of. And you also might tell us if in these multiyear contracts there would be year-by-year review and oversight to see whether the contractors are meeting their annual goals in the contract, or would we have to wait until the end of the contract period to find out that they have started falling behind way early in the game and that with a little early-on oversight that that would have been detected. Would these multiyear contracts lose us the oversight capability of detecting when things were going awry very early in the life of the contract?

I take it you're going to give us a summary of the entire renewed or improved structure that the Department is in the process of putting in place.

Mr. **KENDIG**. Yes, sir. I will furnish you for the record those initiatives that we have entered into during the past year.

[The information referred to follows:]

SPARE PARTS INITIATIVES

Each DoD Component has formulated, is implementing, and is giving high level management attention to a written spare parts initiatives program. As a result, the Army has undertaken 67 initiatives, the Navy 102, and the Air Force 178. The Defense Logistics Agency is substantially augmenting its existing competition and pricing programs with increased emphasis on spare parts acquisition and pricing support for the Military Services by the Defense Contract Administration Services Regions. These initiatives address the functional areas of requirements, finance and budgeting, system development and acquisition decisions on spare parts, contracting, pricing, support, resources, and equipment.

Special task teams have been established to review reprocurement data packages for currency, accuracy, and completeness. These task teams consist of engineering personnel and equipment specialists with support from legal counsel and other functional areas as required. Data rights for competitive reprocurement are being evaluated and DoD has initiated an in-depth study of acquiring reprocurement data and data rights. The breakout regulation establishes a screening procedure to review data when the annual purchase value is $10,000 or more, but DoD activities are screening parts below this threshold.

Additional resources have been assigned exclusively to value engineering tasks. Value engineering techniques applied by government personnel often reduce the cost of parts. Reverse engineering produces technical data suitable for competitive bidding for parts which otherwise are available only from a single source. Additional personnel are being assigned to this function as trained people become available. The dollar threshold for spare parts contracts to contain a value engineering incentive clause has been reduced from $100,000 to $25,000.

Procedures have been established to identify and resolve pricing anomalies and to evaluate price increases over 25%. Additional purchasing personnel have been assigned to analyze significant price increases, negotiate reasonable prices, and accurately justify and document the price increases. The purchase of spare parts when the price has increased by more than 25% within the most recent 12 months period has been prohibited unless the contracting officer certifies in writing to the Head of the Contracting Activity the price is reasonable or that national security interests require the parts be purchased.

The DoD Parts Control Program is being applied mandatorily to all new systems to enhance the use of commercial or common parts, or parts already in the inventory. This program has proven effective in eliminating potentially duplicative parts from entering the inventory. The Services have been directed to have contractors identify their vendors for all parts supplied in the provisioning of a contract and the Services may also direct vendor identification in the replenishment phase.

DoD Components have been directed to change contractor overhead cost allocation practices which result in either distorted or unreasonable practices which result in either distorted or unreasonable prices for spare parts. Equal allocation of overhead costs among all items in a contract has been barred because this accounting practice results in distorted unit prices. Parts with a very low intrinsic value appear grossly overpriced.

Voluntary refunds have been secured, as well as suspension and debarment of offending contractors in appropriate instances. This is an ongoing initiative as instances of unrealistic prices paid come to light and are evaluated. Most cases involve legitimate accounting practices and procedures for overhead allocation but result in skewed unit prices for low dollar parts.

Use of redeterminable ordering agreements has been eliminated in most instances and significantly curtailed even when dictated by readiness and support considerations. Preferred and traditional methods of contracting are being utilized, every effort is made to definitize the price in a timely manner.

The breakout program has been strengthened by new procedures. A revised regulation with stricter procedures was issued in July 1983. Additional technical and engineering personnel have been assigned to implement the regulation. Screening and additional parts breakout is on the increase. A related initiative is the designation of competition advocates and breakout managers at all procuring activities.

Meetings have been held with defense contractors to seek mutual corrective actions. The Deputy Secretary of Defense and top Service officials have communicated with top industry Chief Executive Officers. Industry has been generally responsive and has promised its cooperation.

Pricing "Hot Lines," which have been in existence for several years, have received increased emphasis. Reports of suspected overpricing receive prompt and thorough review by inventory managers in order to correct erroneous prices in the files and to resolve instances of overpricing by contractors.

The Inspector General is continuing to perform audits of spare parts acquisition. Corrective actions are being taken by the Services as verified by the auditors' follow-up reviews. The Inspector General has completed its audit and issued a report on procurement of aircraft engine spare parts. In addition, the Office of Federal Procurement Policy is conducting a study of DoD spare parts policy.

Training curricula have been expanded to include both entry level training and refresher retraining for journeymen.

Personnel evaluation factors are being revised to consider the achievement of economical procurement. Greater emphasis is placed on performance in keeping down costs and prices rather than achieving quantity production and speed.

Modernized automated data processing systems for logistics are being studied and planned to improve processing requirements, procurement functions and technical documentation systems. Improvements are needed in both hardware and software. Implementation will require large investments in equipment over an extended time frame.

A "model" concept program has been developed to motivate industry to achieve increased competition in subcontracting for spare parts and potentially greater opportunity for competitive breakout.

Authorization, appropriation, apportionment, budgeting, and financial management practices and regulations pertaining to the acquisition of spares are being reviewed. Changes will be incorporated in the Department of Defense Budget Guidance Manual in the 1984 revision to be published in July of this year.

The feasibility of biennial budgeting for all appropriations and programs of the Department of Defense is being studied. Acquisition of replenishment spare parts and consumable items is one of the categories being considered for the possible application of biennial budgeting.

Competition advocates have been established as a resource to help the heads of DoD components to achieve competition. Responsibilities of the competition advocates include such things as challenging requirements, specifications, decisions or other actions that may result in an inappropriate noncompetitive procurement or one that appears to be excessively priced; challenge procedures that inhibit competition; insure that competition is planned early in the acquisition cycle; promote value engineering; and insure that noncompetitive contract actions are justified and documented properly.

Representative SCHEUER. Thank you very much. I have two more questions, if I may, Senator.

Senator PROXMIRE. Go ahead.

Representative SCHEUER. May I ask Mrs. Chelimsky or her GAO associate—I don't know if you were here yesterday, but I think you've certainly gotten the drift of the testimony.

Mrs. CHELIMSKY. Yes.

Representative SCHEUER. Two officials yesterday testified on our concerns, the Senator's and mine, and we feel and apparently Mr. Kendig has that feeling too, that it's more than just a penny an item adding up to $100 for a contract. We feel that there are great structural problems over there and that perhaps over here—perhaps in addition to changing the system that doesn't seem to be working very well anyway, we are changing the system so that the Defense Department can do a better job of supervising and performing annual, monthly, weekly, daily oversight over its defense contract. There ought to be a better system here for reviewing progress over there.

I sometimes feel that the most important thing that Congress could do—let's say the 99th Congress starting on January 3—would be not to legislate, take a moratorium from legislating for 6 months or a year and just spend our time doing oversight. Not that we have been given any God-like wisdom. We would hope that it would be done in the initial instance in the executive branch, but the constitution gives them responsibility for doing their own oversight and it gives us responsibility to look over their shoulders.

We have asked Mr. Kendig to give us his overview of the kind of structural chanes that the Department is in the process of putting in place and he's told us that he will do that.

What do you think they ought to be doing to improve the rather dismal record that we have been hearing about today and yesterday and over the past eons of time, and how do you think Congress can improve its performance? I have a feeling that there's great improvement needed on both sides of the aisle in this tripartite form of government, that they should be doing a much better job, but that we also should be helping by performing our oversight function much more intelligently and with much greater precision and much greater fine tuning.

Tell us, what should they be doing and what should we be doing?

Mrs. **Chelimsky**. Yes, sir. Well, of course, I would like to say that in our prepared statement we were very concerned about the kind of monitoring that is going on of the defense industrial base. I would agree with some of the things I have heard here that Mr. Hahn said about the importance of the data base, about the importance of the kind of early warning preventive maintenance as opposed to firefighting after the fact. I guess that from the point of view of the initiatives that we wee the Defense Department taking now, my own sense is that the things that I've read—for instance, in the report by the Task Force To Improve Industrial Responsiveness, I think it's called—a lot of those things are excellent, and then I noticed that the No. 10 recommendation is not going to be implemented. But the No. 10 recommendation is the one that has to do with developing the data base and doing the monitoring.

So the sense that I have is that the letter is OK, but I am not sure about the spirit.

Representative **Scheuer**. How do you know it's not going to be implemented?

Mrs. **Chelimsky**. Because they said they're not going to implement it. The reason they give is that it looks to them as if it's micromanagement of the services. They don't think it's a good idea. But what I'm saying is that we have to do something. You remember Elliot Richardson said a few years ago, "I look at all the programs we have at HEW and I think there may be two people in this whole place that are comparing the big programs and looking at the overall tradeoffs between what we're doing in terms of where we're putting our bucks." This is the same kind of problem it seems to me.

Who's looking at it? How far down do you go? I think the issue we have come up with in the defense industrial base that to me is the most important is that we don't understand what's happening down there in the subtiers. We don't really know how that works. And the reason we don't know is that we don't have data that's collected that can tell us. There are major gaps in the form that is being used, the 1519 form, to collect data on those issues.

So I would say monitoring, data, certainly look at these things with a closer eye than presently has been done, and I have a sense that the Defense Department wants to do that, but there just seems to be a great many difficulties in moving the services, and also in the OSD position vis-a-vis the services. It's not a simple matter. It's a complex problem.

With regard to the Congress, I'd like to see them do more and more and more oversight activity. I think that would be a very important thing. Even if the procedures weren't improved, simply the fact that there was more I think would mean that people know that the kind of thing we are talking about today kind of thing would be discussed more often and I think that would be a great thing.

Representative **Scheuer**. One last question, Senator.

I appreciate your answer very much, Mrs. Chelimsky.

Mr. Hahn, there are those who suggest that if your clients could break into the "Old Boy Club" let us say, they would be happy to participate in the system that exists with the same labor costs and the same system that has produced the waste and abuse that we have now except they would be on the inside enjoying it instead of being on the outside with their noses pressed up against the window looking in.

What can you tell us to give us some kind of feeling that if we could break the system open a bit and provide a little more access to small business, first, that there really would be a cleansing and refreshing air of competition and reduced prices; and, second—and this would be very important to all of us—that your clients could perform to the kind of quality standards and the plans and the very demanding plans and specifications that would be included in many of the Defense Department high-technology items?

I don't think that we want to sacrifice quality of defense procurement for price. I don't think that's what the American public wants. I'm sure it's not what the Senator and I want. We would like to have our cake and eat it too.

Is there any reason why we can't have our cake and eat it too, to achieve both far greater economies in procurement at the quality levels that are called for in the plans and specs and perhaps even a higher standard of quality than we find is the actuality right now, which in many cases falls considerably below what is specified in the plans and specifications?

Mr. HAHN. There is absolutely no reason why you can't have your cake and eat it too. I don't think any of us are naive enough to believe that human nature is any different whether the person in question is a small company or works for a large private contractor.

The fact of the matter is, the high prices that are associated with the hourly rates being charged by large private contractors are being charged by companies who are producing something that was purchased on a sole source basis.

If you can buy it competitively, where a member of our association or a large private contractor know that what he has to produce is at the lowest price for the product at whatever quality level is required, that's your best guarantee of low price.

The problem is, only 20 percent of the spare parts, many of which as Tom mentioned we're talking 20-year-old systems, are being procured competitively through open sealed bid competition.

Second, as far as quality goes, there seems to be in the minds of some people that we've talked to over at the Pentagon some relationship between sole source quality and competition and a lack of quality, and we don't believe that's the case at all.

We think that the Department of Defense or any of the service branches should not accept anything generally that does not meet their standards of quality. There are methods of quality control we fully support that ought to be applied at the level decided upon by the service branches. We have absolutely no problem. Anything that doesn't meet it should be rejected. There's no problem with that whatsoever.

Let me go back to a couple of remarks that Mr. Kendig made. At the time Secretary Weinberger's recommendations or his plan to increase competition was implemented, we made some suggestions as to some points they missed. I started to mention a few of them earlier. I'd like the opportunity to provide our list of additional things that they are not doing right now or not planning to do right now that they should do that will lead to more competition. I'd like to provide that for the record as well.

Second, you mentioned in your discussion oversight. I think that's an absolutely excellent idea. I think Congress has already done several things this year. In fact, it did them last week. Last week both the House of Representatives and the U.S. Senate unanimously passed in both cases legislation designed to increase competition in Government procurement and in spare parts. The bill was the Small Business and Federal Procurement Competition Enhancement Act of 1984. I hope that the people at the Department of Defense will support that legislation. There was also amendments to the 1985 defense authorization designed to achieve the same purposes. I hope they will support that as well.

I think that if these are both signed by the President—and we hope that they would be because they are certainly supported by over 200 associations in the small business community—you will have a process of oversight next year and it will be a process of developing new regulations that can lead to billions of dollars of savings.

I disagree with Mr. Kendig's estimate of savings. We think you could probably save close to $8 billion each year in spare parts alone. All the numbers that we have seen, the savings that SBA found when they went from sole source to open competition, the prices that our guys charge versus the prices in these examples, even allowing for engineering, if you compare $125 an hour average to a $40 an hour average—throw off $20 an hour or whatever for engineering—you're getting down around a 50-percent savings if we can just push something out of the sole source to the competition column.

Representative SCHEUER. Mr. Amlie, do you have any comments on Mr. Hahn's remarks?

Mr. AMLIE. No. I agree with him completely. Competition is the only way I think. We should not and we are not qualified to go in and run the contractor's plant for him. We should give him the incentive to lower the price. Right now the incentive is exactly backward, both for the bureaucrats and for the people that manufacture these things. The more they charge, the more they make. It's just as simple as that.

Representative SCHEUER. Thank you very much, Senator.

Senator PROXMIRE. Mr. Kendig, let me read what the Air Force Auditor General wrote in the March 29, this year report. He said, "One definition of a fair and reasonable price is the price that closely approximates the seller's cost to make or acquire the part, plus a reasonable profit."

Doesn't that mean that negotiated contracts are cost-based and that there's an incentive on the part of the contractor to increase his costs?

Mr. KENDIG. Sir, I don't know what his basis is for making that statement. It is one of many tests, OK. I'm not familiar with it.

Senator PROXMIRE. This is an extract from the report on defense acquisition regulations, GAR section 3, part A, etc., and I quote: "One definition of a fair and reasonable price included in the ASPN is the price that closely approximates the seller's cost to make or acquire the part, plus a reasonable profit."

Mr. KENDIG. OK. That has to be taken in the context of the other items as to what is the contractor's costs. That has to be taken in the context of the fact that the cost that we're talking about is supposed to be a reasonable cost, not just what he incurred. That line is not meant to imply that what he incurs is reasonable.

Senator PROXMIRE. Let me send you the complete statement here and then you can comment for the record if you would.

Mr. KENDIG. Thank you.

Senator PROXMIRE. Mr. Kendig, do you disagree with the fact that cost-based pricing is the approach used in all negotiated contracts?

Mr. KENDIG. If you mean by cost-based pricing that whatever his cost is we're going to give him that plus a profit; yes, sir. We always have to start out with somebody estimating what they think it's going to cost and then we make determinations based on our reviews as to whether or not we agree that the hours that they think they are going to take to manufacture and engineer—whether or not the rates that they are going to incur are accurate and reasonable.

Senator PROXMIRE. The reason I ask this is because the alternative is what has just been discussed by Mr. Hahn and Mr. Amlie. That is, competition. Where we have a cost, as I say, there's an incentive for the defense contractor to negotiate on the basis of the highest cost he can negotiate.

Mr. KENDIG. Senator, I was an auditor both internal and with DCAA for over 20 years before I got my position that I have now, and I have had this one for 7 years. I believe that I would agree with you and just about any auditor who ever worked for DCAA would agree with you that the best possible situation would be to compete everything because we would get the lowest prices under those conditions.

Our major problem, of course, as you know, is that for very much of what we do, it is impossible to really have competition.

Senator PROXMIRE. Impossible is a big word. I think that Mr. Amlie has pointed out to us that competition is tough. It's hard. It's difficult for the procurement agency to secure competition, but it's certainly worth the time to the taxpayers. It's much easier to just go along with the negotiated situation.

Mr. KENDIG. Why I used the term "impossible," sir, is simply that, given the kinds of things that we are buying, we only have one shipyard in the United States that can produce a big aircraft carrier for us. So we really can't compete. Once we make a technical determination through competition and have a person really producing a particular aircraft for us, we can't really second source it with the number of aircraft that we're going to buy.

Now down into the guts of those systems, when we get down into the pieces and parts that go into it, I absolutely agree and so does the Department agree that the best thing that we can have is competition for those items. And again, I have to assert that I do believe that what the administration that is in the Pentagon right now is intending to do is to do exactly what you want to do, sir.

Senator **Proxmire**. Well, you're right about the shipyards, that there are very few shipyards that can build aircraft carriers or submarines and that kind of thing. That's one of the problems we have to work on. We have to do what we can to broaden the defense base and diversify the defense base and get competition there. I hate to think of the kind of situation we'd have in this country in the private sector if we didn't have competition. It's the heart of our operations. It's the reason why we are so efficient in private operations.

Let me ask you, Mr. Hahn—the GAO report we heard summarized this morning concludes that the most current and potential production constraints occur at the subcontracting levels. That is, among smaller firms such as your members.

Doesn't that suggest that even if there were more competition the smaller firms could not significantly increase their volume of business and that they don't have the capacity?

Mr. **Hahn**. Well, I think we have plenty of capacity. I think you mentioned the fact earlier that skilled labor, which is one of our most critical factors, the shortage that we used to have, is not nearly so tight. It takes 4 years to train a journeyman. And we have that capacity and we have plenty of people who would be more than happy if they could bid on some of these parts to put on a second shift if they had to. It's an industry also that lives on overtime. Many of the people will work 50 and sometimes 60 hours a week. We think the capacity is there or we wouldn't be here.

Senator **Proxmire**. How do you reconcile the GAO finding that there is not sufficient capacity? Are they wrong?

Mr. **Hahn**. I think they are wrong.

Senator **Proxmire**. Mrs. Chelimsky, do you want to respond to that?

Mrs. **Chelimsky**. Well, I think with regard to most of the constraints that we found what we were saying is not so much that there was a lack of capacity there, but that there is a lack of knowledge of what happens. The problem with the labor shortage that we mentioned, we think is really due to the economic environment that we have now.

Senator **Proxmire**. Well, I want to repeat what I was saying was that the constraints occur at the subcontracting levels. You say they occur not just because of lack of capacity on the part of subcontractors but they occur because of a lack of data, a lack of information, a lack of knowledge?

Mrs. **Chelimsky**. No; I wasn't saying that. I'm sorry. I was not clear. What I'm saying is that it seems to me that what happens is that you have a kind of a fluid dynamic system in which what happens to the prime contractor cascades down through the tiers. So the prime contractor may have problems that the subcontractor doesn't have and vice-versa.

To say that all the capacity problems are in the subtiers I think is not exactly right because they all are linked together and they have interacting effects upon each other.

Would you like to add to that, Mr. Solomon?

Mr. Solomon. I'd like to add that I also don't think there is a contradiction between what Mr. Hahn said and what we said in our report. We found production constraints at subcontractors already in the defense industry. We are not talking about the small contractors trying to get in and produce additional goods.

Senator Proxmire. You're saying the capacity is out there but they can't get into the defense subcontracting?

Mr. Solomon. I'm saying there is no contradiction between what Mr. Hahn said and what we said in our report. The ones we looked at did have some real constraints. We found subcontractors supporting a number of major weapon systems, not just one.

Senator Proxmire. So there's another reason for broadening the base and getting in as many as possible.

Mr. Solomon. Absolutely right.

Mrs. Chelimsky. Exactly.

Senator Proxmire. Mrs. Chelimsky, explain why widespread use of proprietary processes is a problem, whether it increases costs, and how you would respond to the argument that if new processes cannot be maintained as proprietary there is no incentive for firms to develop new processes.

Mrs. Chelimsky. I have a problem with something that Mr. Amlie said earlier. Could I just ask him a question about that before I answer your question?

Senator Proxmire. All right.

Mrs. Chelimsky. It's entirely relevant. Mr. Amlie, you were saying that there is no such thing as a proprietary right?

Mr. Amlie. That's what the lawyers tell me.

Mrs. Chelimsky. Now did you mean by that that the proprietary processes that people are living by don't exist or simply that they shouldn't exist?

Mr. Amlie. They should not exist. What the contractors do, Senator, we have Government specifications and good ones for just about everything—for plating, for heat treating, for almost anything. The contractors will rewrite these and put their own number on them and claim they are proprietary. But heat treating, painting, electronic plating, just normal industrial processes, they label proprietary. I think it's a scandal.

Senator Proxmire. There may not be a legal basis, but isn't there an economic basis, an incentive to cut your costs?

Mr. Amlie. Surely, but there are very few real industrial secrets. Coca-Cola syrup and some others like DuPont chemicals, nobody can figure out how to make them.

Mrs. Chelimsky. But the processes are held by these two companies and it's impossible really for another bidder to get in. We're talking about competition.

What we found was that 25 out of the 39 contractors of the subs and primes that we visited have proprietary processes. That's 62.5 percent—really quite a lot.

Senator Proxmire. You provide a long list of types of information about the subcontracting that is now lacking. You say plant capacity, numbers of employees, foreign sources, scrap and rework rates, unit costs, leadtime, and the like.

How do you explain the absence of such basic information, and what do you specifically recommend that the Defense Department do about it? How should the lack of data be remedied?

Mrs. CHELIMSKY. This goes back to something we've said for a few years at the GAO. That is, that this 1519 form, which is the basis for all the specific weapon system data that we have, doesn't always ask the right questions. First of all, the right systems to ask questions about are not necessarily selected, and then the whole business of allocation of information resources seems to get skewed, so that we found ourselves, as you saw in the paper, discovering that one subcontractor was entirely foreign source-dependent and the service didn't know it. Now this is not a cost problem, but it is a problem for maximum production in emergency conditions or war conditions. DOD ought to know, it seems to me, what production is dependent on which foreign sources.

So what I'm saying is that I don't think that in the data forms that we see, in the monitoring systems that we see, there seems to be the objective of getting the kind of information that's needed for looking at what we do have now and what we won't have when we need to have it.

Senator PROXMIRE. Mr. Kendig, why does the Defense Department condone the use of "slaving" as described in the GAO report and why has the problem been allowed to persist on the M-1 tank?

Mr. KENDIG. Sir, I am not familiar with the GAO report and I am not the proper person to give you that answer. I will have to give you that for the record. If we had known that we were going to get into this type of issue, we would have had the director of the Office of Resources come along and he's not here.

Senator PROXMIRE. Along that line, I wonder if you would review the information given to us by Mr. Fitzgerald and Mr. Parfitt and comment on it for the record.

Mr. KENDIG. Yes, sir.

[The following information was subsequently supplied for the record:]

STANDARD LABOR HOURLY RATES

The data presented by Mr. Fitzgerald represented Standard Labor Hourly Rates for several large defense contracts. During the course of the hearings these rates were compared to hourly rates of small business firms averaging 15–25 employees. Several factors that contribute to the difference in the amount of the rates are as follows:

1. The large business rates as presented include the cost of one hour of productive labor effort plus such additives as shipping, tooling, quality, planning, etc. The small business labor hour rates to do not include these additive factors. Therefore, to adjust for this difference, the labor hours must either be increased for small businesses or these factors would have to be added to the small business labor rate. This could significantly increase the small business hourly rate. Since information was not available to compute the Standard Labor Hour Rate for small businesses, we cannot quantify the difference in this respect. We believe it would be substantial.

2. Fringe benefits for large businesses are considerably higher than for small businesses. One of the primary reasons is that most large businesses' fringe benefit packages are a part of their union agreements. Our discussions with Mr. Bruce N. Hahn, Manager of Government Affairs, National Tooling and Machine Association indicated that the small businesses in his Statement (Averaging 15–25 employees) do not have unions and have very limited fringe benefits for their employees. This one item accounts for a large difference in rates. For example, the company that showed a total attributed cost of $99.37 per standard labor hour included about $13.50 for fringe benefits.

3. During the hearings, we pointed out the engineering costs for large businesses accounted for a significant part of the difference in rates. In addition, large businesses also have a factor included in their Standard Labor Hour Rate for Independent Research and Development that is not included in the small business rate. For one company where we have the details readily available, this accounted for about $7 of the total hourly rates.

4. Small businesses are normally more labor intensive than large businesses. Therefore, large businesses would use less hours but would have more depreciation and occupany costs for plant and equipment than small businesses. Because we do not have this information for small businesses, we cannot quantify the extent of the difference. We believe it could be significant.

I want to emphasize, however, that despite the fact that we do not believe the difference in the Standard Labor Hourly Rate between large businesses and small businesses is nearly as large as was presented, the Department is taking aggressive action to breakout items for competitive procurement.

Senator PROXMIRE. And I would also like you to provide the comments to the GAO report presented by Mrs. Chelimsky.

Mr. KENDIG. Yes, sir.

[The information referred to follows:]

GAO REPORT No. 973176

The findings of the report are consistent with the many other investigations and special studies which have taken place within the past three years. The report gives recognition to a number of the initiatives taken by the DOD to bring about resolution. It must be pointed out however, that DOD has concluded a number of other significant analysis efforts and policy changes which postdate this report. A formal reply to the GAO report is currently in process which addresses each of the report findings. The comments add additional qualification or clarification to either insure an understanding of the context and/or to give further recognition to actions the DOD has taken but are not fully reflected in the report. A particular problem we have in understanding the report is the apparent mixing of observations of peacetime constraints and surge/mobilization constraints. Frequently, it is not clear what requirement the auditor was working against or concerned with. A recommendation was made that the GAO consider restructuring the report to separate these two areas. Depending upon the coordiantion process within DOD, the formal DOD comments should be available by the latter part of November 1984.

Senator PROXMIRE. Did you want to make a comment, Mr. Amlie?

Mr. AMLIE. On the "slaving," Senator, that was principally on the M-1 tank and it was because of a problem in the contract. We were not getting engines fast enough and so what at that time Chrysler and then General Dynamics was doing was building a complete tank, driving it out of the yard, pulling the engine out of it, and then take it right back into the factory and putting it into another tank, drag it out and pull the engine out. The reason they did this was that we forced them to do it because of the clauses in the contract with the major tank manufacturer that had penalties for the Government if we didn't supply the engine. It was absolutely ludicrous, but that's what happened.

Senator PROXMIRE. Thank you. I understand that Congressman Scheuer has one last question and I have a closing statement.

Representative SCHEUER. I have a question for Mr. Kendig.

Senator PROXMIRE. Go right ahead.

Representative SCHEUER. Mr. Kendig, you mentioned what looks like a very serious problem in expanding competition when you pointed out aircraft carriers. I don't know what the answer would be there. The prospect of asking foreign bidders from around the world where they have major shipyards to compete would pose certainly some very emotionally blatant political problems for the Hill and I'm not sure whether we could stand up to that kind of problem.

But in the rest of the procurement of planes and tanks and missiles and weapons of all kinds, you wouldn't have that kind of problem. And I was wondering—leaving these vast aircraft carriers aside—for the rest of your procurement, what do you see as the major problem in expanding competition as you have heard Mr. Hahn, Mr. Amlie, and Mrs. Chelimsky suggest. To reach right down to the guts and the innards of the American industrial base and take advantage of all that ability, talent, and the competitive potential that would be opened up, if you could open up your process and bring them into the stream of commerce, so to speak, and enable them to bid on the vast proportion of your work that would not be constituted by aircraft carriers?

Mr. KENDIG. There is a two-step problem with competition, sir. When we talk about our major weapon systems themselves, we go out and we do have technical and price competition when we are going to try to work a weapons system or a major portion of a weapons system such as the engine or perhaps the fire control system, things of this type. Once we have selected a contractor for that weapons system, we quite often find that we are now locked into the contractor and we cannot compete the weapon system itself because it would be absolutely uneconomical due to the rates of our procurement to have more than one contractor.

So in reality, we are down to: OK, how about those parts that are at the subcontract level? Can we improve our competition in that area, particularly in the area of additional spare parts? I do believe, again—this is what I'm saying here—that a major effort is underway within the Department of Defense now, one that did not exist before even though the problem did exist before, to accomplish what hadn't been accomplished before, to break these things out and to compete them. That is the thing that I will furnish for the record and I think this is what we have to understand, in my view. We cannot talk about that we will ever be able to really compete the weapon system. Once we settle on somebody to build the F-15, we are not going to be able to get a parallel contractor that is also going to build F-15's for us. We just don't have the number of aircraft to support those new companies. The cost would be astronomical.

So it's down at the lower levels that we can accomplish something and where we are able to do so.

Senator PROXMIRE. I beg your pardon. Unfortunately, I'm going to give you the gavel and you can chair the rest of the meeting, but I'm going to have to leave for a rollcall and before I do I want to make a quick closing statement and then it's all yours. You're at the tender mercy of Congressman Scheuer—not very tender either.

First, I want to thank all of our witnesses today. These are difficult problems and all of you have helped our understanding of them. But I must say to the Defense Department that I am not satisfied with the explanations I have heard and the taxpayers are not satisfied.

After so many years, trying is no excuse. Results are what count. Results of the system now are simply not acceptable. They are abominable. The Defense Department excuses just won't do.

I announced yesterday that I had planned to call in some of the large contractors to testify and maybe they can explain why smaller firms charge labor cost markups that are a small fraction of what the large companies charge.

I also plan to have Secretary Weinberger explain how he plans to clean up what's clearly the biggest and most obscene mess in Washington.

Now, Congressman Scheuer, it's all yours.

Representative SCHEUER [presiding]. I take it when you talk about the F-15 or the F-16 that what we're talking about is breaking down that contract to the airframes, the electronic elements, the computer elements, the navigational elements, so that you don't put out a contract for the F-15 or F-16. You put out—I am by no means an ordnance expert, although I am a graduate of the Harvard Business School—but you do put out multiple contracts for bidding on the constituent component elements of the F-15 or F-16 and then I suppose you have a master contract to put it all together.

Wouldn't that be kind of what we're talking about, breaking it down in to as many smaller component parts as possible from the airframe on down so that you wouldn't have the kind of numbers that would be involved in an F-15 or F-16 which is a $40 million plane; you would have perhaps not more than 10, 15, or 20 percent of that in the largest subcontracts. This is what I'm talking about, breaking it down.

Mr. KENDIG. If I understand you correctly, sir, if you're suggesting that we could somehow or another put out separate contracts for all the systems that had to be integrated into the particular aircraft and we guarantee to somebody that all those parts are going to fit, I think we would be getting ourselves into one big problem.

Representative SCHEUER. Wait a minute. Who's guaranteeing it?

Mr. KENDIG. If we in the Department of Defense go out and buy a radar from a particular company and go out and buy an airframe from somebody else——

Representative SCHEUER. Let's say there was a general contractor but the various components are broken down.

Mr. KENDIG. We do have a general contractor. That is the process now. As I understand our process, that is the process we use. We go to a General Dynamics or a Boeing and we say to them, "We want this aircraft," and they are our general contractors. They produce the frame and the rest of it.

Representative SCHEUER. What I'm saying, Mr. Kendig, is you go to Boeing or whoever and say, "We want this F-16 and we want you to put it out to bid and we want the component parts bid out and you can bid on the whole job and you can also bid on any of the component parts, but we want the price for the whole job to be determined by the effects of competition for the component parts. Any of those parts that you can bid in, great, but we are going to let all the members of Mr. Hahn's group who have the capability of doing a high quality job—we're going to let them bid on the component parts too, and you bid on the component parts. It's going to be your responsibility to put it all together, but you're got to allow the industrial base of America to have an opportunity to participate in producing the component elements of that F-16."

Now this whole thing is a cost-benefit problem, a problem of cost-benefit analysis. What would be the extra cost of going through that multiple bidding process for all of these parts as against just giving it to a prime contractor? What would be the benefits that that would bring in terms of competition, in terms of reduced prices for all the elements, and, therefore, reflected in the final cost of the job?

That's a very—I won't say it's a simple job of cost-benefit analysis, but it's a perfectly conventional job of cost-benefit analysis. Why would not that approach of breaking down these big ticket items into constituent elements and requiring that not only the general contract be put out for bid, but requiring that the components themselves be subject to bid by whoever bid for the general contract, as well as all the members of Mr. Hahn's group, who perhaps wouldn't be qualified to do the general contract, but who might be well qualified to do the hundreds or even thousands of component elements in that contract? What would be wrong with that approach?

Mr. KENDIG. Basically, sir, as I understand our technical problem, when we go out on a weapons system we are not going out and asking for somebody to bid on a weapons system for which we have complete specifications and designs. We are going out and we are going to have that weapons system designed.

So the first thing we have to do is we have to go to somebody, competing it of course, selecting the prime contractor that will be the person that will design and develop that aircraft or that weapons system.

So you cannot start out at the level that you are talking about. That person then does go to subcontractors and has those subcontrators compete on the various components, but again on the same basis, that you've going to have to design a radar or weapons system, or a fire control system, whatever, and they have very technical and price competition with them and they make their selection?

So we keep narrowing it down. If, on the other hand, what we were saying is that, yes, we have a weapons system which is mature, we have the design, we know what the specifications are, at least something close to what exists when you go out and get the general contractor, there's the place that we want to put the dam and they can make that kind of determination. It's proven they know what they're talking about. We do do that, but we don't make that condition.

The thing that we'd have to do is after we have it completely designed, after it is functioning, then we go to the contractor—and this is what we are zeroing in on and what we are going to have included in our contracts are some of the things that were suggested today—the ability to break out these parts once the design has been established so that we can go and we can get for the spare parts and other places where it could save us direct purchases from those subcontractors.

Representative SCHEUER. Mr. Kendig, how do you determine when the R&D contract stands by itself and when the R&D contract is merged with the production contract? That seems to be the nub of the problem. All these smaller firms Mr. Hahn represents would have trouble—or many of them would have trouble bidding on a very sophisticated R&D contract. They are producers. You would open the process a great deal if you could have an R&D contract, it seems to me, and then have a contractor produce that item.

Under what circumstances must the R&D contract lead to the production contract and under what other circumstances would it be perfectly reasonable and acceptable for there to be a separate R&D contract and then when you have the final state of the art technology developed and you're satisfied that it works, then you open that up to competition and having broken down the F-16 into hundreds—I don't know how many different component elements—you would invite bidding on all of those constituent parts?

Mr. KENDIG. Sir, as I understand it, when we are actually talking about producing a weapons system, I have been told that technically it is not feasible to award an R&D contract to one company and expect that at the conclusion of that R&D contract that somebody else is going to be able to produce that weapons system for you.

Representative SCHEUER. Could you explain why not?

Mr. KENDIG. As I understanding it, it has to do with the fact that the development of the system is all on the basis of how you develop it and the idea is also how you're going to produce it and then you have to come up with your production models, so to speak, and things of that type, and it's all tied into the process that these contractors use and that these processes—not because they are proprietary or even cheaper, but just because people do things in slightly different ways—that these things are generally just not transferable. In other words, a Boeing developing something for an aircraft. You could not simply turn around and after they said this is the way it should be done, throw it out to the other aircraft manufacturers and say to them, OK, we want you all to bid on this, and expect that that development at the place that they reach that those other companies will then be able to produce that aircraft.

Representative SCHEUER. Why wouldn't they?

Mr. KENDIG. Pardon me, sir.

Representative SCHEUER. I'm a graduate of the Harvard Business School with a degree in industrial administration. I am no expert and my degree is a date I'm sorry to say of 40 years ago, so my learning is quite redundant and antiquated by the passage of decades, but still there are those vestigial little voices that speak to me, and those little voices are telling me to take what you have said con solas grata—with a large grain of salt. There's nothing that I know of that would prevent putting out a contract for R&D that would include what's to be designed and how you go about doing it. Once that contract were completed, it would be let out for bid.

Again, I have to express in humility that I could be very wrong. I could be grossly mistaken. But I want to know more about why you think that the vast array of R&D contracts could not be let out as R&D contracts and then a second phase would be the setting up of any procedures for the constituent elements in the product of the R&D contract. I would like you to give us some detailed thinking, if you would submit this to the subcommittee, on what would be the criteria of an R&D contract that would prevent that from being let our for bidding simply as an R&D contract.

What would be the criteria which would absolutely mandate that the firm that got that R&D contract must also have the contract to produce that system, whatever it was, whether it's an aircraft or a tank or a missile—whatever. Would you give us that?

Mr. **Kendig.** I will get you an answer for the record.

[The following information was subsequently supplied for the record:]

R&D Competitive Procurement

The Department has initiated several policy initiatives to increase competition. The Defense Acquisition Improvement Program, instituted in 1981, includes an inititative to incease competition in the acquisition process. In addition, a High-Level Working Group on Competition has been established under the direction of the Under Secretary of Defense for Research and Engineering. Numerous benefits are attributed to production competition. These range from decreases in unit procurement cost to increases in equipment quality and industrial productivity. One must recognize, however, that production competition also involves additional costs. The most recognizable cost is the increased initial funding necessary for solicitation of a second source, technology transfer, procurement of tooling and test equipment, and qualification testing. These nonrecurring costs are incurred early in the program. Therefore, budgets and appropriations must be increased during the early years to accommodate production competition. Production competition is a complex undertaking requiring detailed and rigorous analyses of the economic, technical, and programmatic aspects of a particular program. We have developed guidance that provides the program manager with a systematic approach to reviewing the suitability of a program for production competition. These analyses are extemely complex and include many variables. For example, the economic variables include such things as total quantity, production duration, progress curve, tooling and test equipment costs, and contractor capacity. Technical variables include such things as technical complexities, state-of-the-art, potential for other applications, and privately funded research and development. In summary, production competition is achievable and the Department is pursuing it aggressively. However, it requires a lot of early planning and increased investment in the early years of a program.

Representative **Scheuer.** Good. I will submit it to my old professor at the Harvard Business School, if any of them have survived there since 1944.

Mr. Amlie, do you have any reaction to this?

Mr. **Amlie.** I disagree in some ways. He brought up the example of Boeing designing an airplane. Many years ago, Boeing designed the most complicated airplane ever built up to that time, the B–47. We did compete it and at one time we had three contractors building the B–47, building excellent airplanes. So it is not beyond man's knowledge to take someone else's drawing and to build very satisfactory equipment on a competitive basis, even for something as complicated as the B–47 was.

Representative **Scheuer.** Mr. Hahn.

Mr. **Hahn.** I would agree with you, Congressman. I believe that the design, research, and engineering process is not inherently tied to the production process. Designs are relatively unstable in the early stages of production and development. They don't come up with the final design and they change quite a bit. But I think Mr. Kendig made a point that there is a lot of subcontracting going on, not only of major components but of subcomponents. Some of the major systems manufacturers sub out as much as 70 percent of them. They say at the absolutely earliest stage that this particular piece we'll sub at $40 an hour and this particular piece we'll sub at $20 an hour, and what they mark it up to I don't know.

Representative **SCHEUER**. But we do know.

Mr. **HAHN**. I don't know what the markup is on the work that was first competitive.

Representative **SCHEUER**. We got that information yesterday that for a $10-an-hour labor rate, the ultimate cost to the Government ends up being——

Mr. **HAHN**. That may be the part that they produce themselves as compared to the part they put out.

Representative **SCHEUER**. Yes.

Mr. **HAHN**. But very often our members will provide the subcontractors the first shot. In other words, this is what we think our first test is of what we need and the engineering changes and they do the second and the third and the fourth and fifth version. What I can't understand I think is the same thing you can't understand is that a prime contractor or a major subcontractor can turn around and get competitive bids. Why couldn't the Government do it or why couldn't the prime general contractor be required to do it? I sure don't know why.

Representative **SCHEUER**. My last question, Mrs. Chelimsky, you really laid it on us here in the Congress but good, and I'm happy you did, and you said what we need is more and more and more congressional oversight.

Mrs. **CHELIMSKY**. I've just come back from France where they have none and so that's probably the reason I'm so enthusiastic about it.

Representative **SCHEUER**. Well, I must tell you, we heard yesterday that the French manage to oversee their military procurement program with 15 auditors and we seem to have thousands.

Mrs. **CHELIMSKY**. But it isn't their parliament that does it. It's the executive branch.

Representative **SCHEUER**. Right. You said more and more and more oversight. We are really at somewhat of a loss now as to how to proceed with oversight. We have the Armed Services Committee. They have their oversight subcommittee headed up by Sam Stratton, a very good friend of mine who is an extremely capable and talented and hard-working and diligent Member of the Congress from my State, and many diligent members of that committee. But I will have to say that the result has been that the oversight system as of now hasn't had much of an impact.

Now our committee is beginning to get involved. Our committee was involved 10 years ago, Senator Proxmire told us yesterday.

How much of an impact are we going to have on events remains to be seen. We will be waiting with interest to see the additional comments and thoughts that Mr. Kendig is going to send us.

During World War II, there was a special Truman Investigating Committee, senatorial investigating committee.

Looking at the whole range of experience that has taken place in the last generation or so on oversight from Congress on defense procurement and if you had a clean slate and you could bring in an instant formation any oversight process that you thought would work the best, what would your recommendations be?

Do we need a new independent something that hasn't been here before?

Mrs. **Chelimsky**. I don't know. I would have to think about that, but I do feel that there are some things that we could do that I'm not sure we are doing, although it may be that we are and I just don't know it. It seems to me that with oversight there are three kinds of things you want to look at in what's happening.

You want to know how the program that is being suggested has been formulated. In other words, have we done this before and it failed? Is this something that somebody just dreamed up? Is it a real program? Is it likely to do what it's supposed to do? That would be one kind of oversight, up front, at the beginning of a proposed program.

The second kind of thing to look at would be how an existing program is being implemented. What's happening in that program? Is it what the Congress intended? Are the people that are supposed to be getting the services actually getting those services? I'm speaking not just from the defense point of view; I'm speaking about programs and oversight generally.

The third kind of oversight, of course, is the accountability question. That's the question, did the program work? Did we get what we paid for? Is it worth changing it? How should we change it?

So having three kinds of oversight programs, it seems to me, is a reasonable thing to do. I don't think we're doing it in that systematic way.

The other thing I feel is that you cannot expect a lot of progress very fast. I think that oversight serves as a kind of a check; it tells people that we're here and we're going to look at public programs and how they are working. It counts what the Congress says, but it still is only a control mechanism; and while it makes a lot of sense, a control mechanism can't implement a program. It can't do the actual job; it never can. So in a certain sense, when we're saying let's come down harder on this and let's get it done, that doesn't take away the fact that a lot of these programs are very complex; that feasibility is a question that you always have to look at. We're talking about some very difficult things in some cases.

So that's why I would look at the implementation of a program as well as its formulation and the accountability question. That way we can pinpoint better what has gone wrong, when and why. Let me think some more about the way Congress is organized for oversight and come back to you on that.

Representative **Scheuer**. Very good. Thank you very much, Mrs. Chelimsky.

We have a rollcall vote on the House side and I'm really going to have to go to get that vote taken.

Mr. **Kendig**. I just wanted to get a point of clarification, please. I believe Senator Proxmire asked the Department of Defense to comment on the GAO report which has not been issued. Perhaps he meant on the GAO statement. Would that be correct? Our comments on the GAO statement presented here today?

Mr. **Kaufman**. Yes. He intended that your comments be in response to today's testimony.

Mr. **Kendig**. OK. Fine. He said report and it wasn't issued. I just found that out.

Representative **Scheuer**. I want to thank all the witnesses for their very fine testimony. Thank you very much. The subcommittee stands adjourned.

[Whereupon, at 12:30 p.m., the subcommittee adjourned, subject to the call of the Chair.]

DEFENSE ECONOMICS ISSUES

FRIDAY, SEPTEMBER 6, 1985

CONGRESS OF THE UNITED STATES, SUBCOMMITTEE ON ECONOMIC RESOURCES, COMPETITIVENESS, AND SECURITY ECONOMICS OF THE JOINT ECONOMIC COMMITTEE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:40 a.m., in room 2359, Rayburn House Office Building, Hon. William Proxmire (vice chairman of the subcommittee) presiding.

Present: Senator Proxmire.

Also present: Richard F Kaufman, general counsel.

OPENING STATEMENT OF SENATOR PROXMIRE, VICE CHAIRMAN

Senator **PROXMIRE**. The subcommittee will come to order. In October of last year, we had hearings on the causes of excessive defense costs in which we had testimony from A. Ernest Fitzgerald and Colin Parfitt on some very large price markups in the procurement of spare parts. The parts were for some of our most up-to-date weapons and the manufacturers were six of the Nation's largest defense contractors.

The Air Force suppressed the names of the contractors and the identification of the weapons. The logic of this policy strikes me as absurd. Why conceal from the general public the names of contractors who are getting price markups from 200 percent to 600 percent greater than what nondefense manufacturing firms get for comparable work?

The Air Force was asked 11 months ago to justify its action in gagging Mr. Fitzgerald and Mr. Parfitt. One reason for this hearing is to find out why the Air Force is taking so long to explain itself and to see whether it will agree, finally, to divulge the names.

Another reason for the hearing is to learn whether the information we obtained from the Air Force was incorrect and whether it was intended to mislead us. The data showed extremely high-price markups, two to six times higher than what commercial manufacturing firms charge.

I am now informed that in one instance at least the Air Force data may have substantially understated the markup.

Finally, we want to advance the discussion of the causes of defense waste and mismanagement and to understand whether the Air Force is committed to eliminating them. In the past, the Pentagon has cracked down harder on the employees who have tried to expose waste than on those that are responsible for the waste. If there has been any change of attitude within the hierarchy of the Pentagon, it has been impossible to detect.

So far, all we have seen are attempts to cover up or minimize problems of waste and mismanagement. And we have also seen hasty efforts to catch up with and take credit for revelations made by Members of Congress and the press. But there have been no movements toward real reform in the Pentagon.

We would, of course, be delighted to find out today that the Air Force is taking steps to cut down on waste. Our first witnesses are A. Ernest Fitzgerald and Colin Parfitt; they have no prepared statements. I'll therefore begin by asking them some questions, and then I will ask Assistant Secretary Carver to present his testimony.

Before we begin, will all the witnesses stand?

[Witnesses sworn.]

Senator PROXMIRE. As I say, Mr. Fitzgerald, I understand, has no prepared statement. Neither does Colin Parfitt. I have some questions for each. Then we'll hear from Mr. Carver, and I'll have some questions for Mr. Carver.

Mr. Fitzgerald, in the hearings in October last year, you were prevented from disclosing the names of contractors who have been allowed extremely high-price markups on spare parts they sold to the Air Force and you were not allowed to disclose the names of the weapons for which the parts were intended.

You questioned the Air Force decision to prevent you from making those public disclosures. You told us you would provide an official Air Force explanation for the record.

What happened then?

TESTIMONY OF A. ERNEST FITZGERALD, MANAGEMENT SYSTEMS DEPUTY, OFFICE OF THE COMPTROLLER OF THE AIR FORCE, ACCOMPANIED BY COLIN D. PARFITT, SPECIAL ASSISTANT FOR SYSTEMS ACCOUNTING

Mr. FITZGERALD. Mr. Vice Chairman, I received a number of partial responses indirectly. To this day, the General Counsel of the Air Force has not responded directly to my request for clarification and for examples, the examples being the most important evidence I think we have in this matter.

My request to the General Counsel was that he furnish us cost and pricing data obtained by prime contractors when dealing with other private firms who are subcontractors to them.

I thought that that would clarify in the minds of not only your subcommittee members and staff, but our own lawyers, the fact that, under our laws, prime contractors negotiating subcontracts with other firms are required, on contracts above a certain threshold value, to obtain from those firms, who are subcontractors, cost and pricing data. The very kind of information that we had collected and presented for presentation to your subcommittee last year.

The reason that's important was that if it's made clear that such data was not secret at all, given the fact that it is not secret, there's no way it could be construed as a trade secret.

I thought that Mr. Timmons agreed with us prior to the hearing, in my conversations with him and Mr. Parfitt. But, apparently, when it came to writing it, we never really received anything that dealt with that specifically.

Senator Proxmire. Do you have any idea why it's taken so long for the Air Force to provide an explanation?

Mr. Fitzgerald. I have no direct knowledge; no, sir.

Senator Proxmire. Do you have any indirect knowledge?

Mr. Fitzgerald. Well, I ~~have~~ only my own analysis and belief.

Senator Proxmire. That's what I want.

Mr. Fitzgerald. I think that it is that there's just no way they can argue this is secret. I, on my own——

Senator Proxmire. That may be true. Why don't they disclose it?

Mr. Fitzgerald. I think it's embarrassing; for one thing, that you'd have to ask the individuals involved to know what's in their minds, but, the fact is that we collected from one of our contractors cost and pricing data, which they collected from their subcontractor, data which they themselves, and this is Boeing at Wichita, KS, presented to their prime on the B-1 contract.

That was one of the two things that I asked our General Counsel to provide. The response, which I saw only yesterday—not to me, but to Mr. Parfitt—said the data would be too voluminous to deal with.

Well, it's not. There are the monthly reports which they are required to submit, and the cost analysis reports. There's a lot of paper, but they're not something we're incapable of dealing with over a period of 11 months.

Senator Proxmire. So they just responded yesterday to a request that you made last October?

Mr. Fitzgerald. I believe they responded in interim fashion previously. In my letter to you recently, I referred to a letter, some responses that we had received on August 9, which didn't deal with this question at all.

Senator Proxmire. Do you believe the Air Force attempted to intimidate you and Mr. Parfitt from giving complete testimony? And from responding to all the questions?

Mr. Fitzgerald. Well, Mr. Vice Chairman, with one qualification. When you say "the Air Force," I don't think the whole Air Force. I'm not even certain what knowledge Secretary Orr had of the matter.

But I can't read Mr. Timmons' actions in any other way. Mr. Parfitt wrote a contemporaneous memorandum which he gave to me, which set off my discussions with the General Counsel. And I'll submit this for the record, if you wish.

On the 5th of October, which, amongst other things, stated—and I'll quote from it:

"He," referring to Mr. Timmons, cautions to me on the confidential and proprietary nature of the data, and "told me to be careful not to violate 18 U.S.C. 1905, and said that I should respond in generalities, not specifics, to questions put by the subcommittee at this hearing."

I just can't read that any other way. That became very clear in our subsequent discussions with Mr. Timmons and others that they desired that we fuzz up our answers.

You and I, I think, have confronted that situation before, Mr. Vice Chairman.

Senator Proxmire. Was he more specific? Did he give any examples of what he meant by "generalities instead of specifics"?

Mr. **Fitzgerald**. I would defer to Mr. Parfitt on that. I don't recall his being specific at all on that point. We discussed various alternatives with him that could result in getting his approval for the statement.

If Mr. Parfitt remembers anything, I'll defer to him.

Senator **Proxmire**. Mr. Parfitt.

Mr. **Parfitt**. No, sir, he did not elaborate on it at all.

Senator **Proxmire**. Mr. Fitzgerald, what's your reaction to the Air Force's legal memorandum dated September 4, 1985?

Is it still your position that the Air Force is acting correctly? I should say, incorrectly or improperly, by withholding the names of the contractors and the names of the weapons from the public.

Mr. **Fitzgerald**. Senator, I'm not a lawyer, despite my long experience with lawyers. And I wouldn't want to be put in the position of making a legal decision. But, I think, logically, it's perfectly clear that cost and pricing data is rather fully circulated amongst competitors within the defense contracting industry. And I've seen this for 30 years.

I simply wanted confirmation from the general counsel. The memo of yesterday and, as a matter of fact, the August 9 memo, does finally concede what I think was conceded tacitly all along, that Congress has every right to the data.

Senator **Proxmire**. And the data that you wanted, you're convinced that that data was circulated freely among the competitors?

Mr. **Fitzgerald**. That type of data; yes, sir. Markup data has to be looked at in order to negotiate subcontracts. If the prime contractors are doing the job, they must get this kind of data. And, in fact, the one sample that we collected from Boeing contains excellent instructions on how to go about it, including such things as collecting labor efficiency trend information, the very kind of information Senator Grassley has been trying to collect.

Senator **Proxmire**. If the competitors have it, why shouldn't the public have it? Any reason? Can you think of any?

Mr. **Fitzgerald**. No, other than just to cover up embarrassment. Here, we have a situation in which competitors have the data, members of the executive branch can get it, and we now have had concessions that Members of Congress have every right to it.

There has never been a legal question about that. Through the General Accounting Office, Congress has always had access to that. The General Accounting Office, back when they were tougher, had a very clear position on their view of 18 U.S.C. 1905, which, incidentally, is a criminal statute and could have resulted, had the cautionary warnings we were given, Mr. Parfitt and I, had been ignored, and we could have been prosecuted. We could have been thrown in jail and subjected to stiff fines. That's intimidating.

But, the General Accounting Office has long since held the position, and I'll quote from their conclusion:

> It is the position of the General Accounting Office that since these audit reports to the Congress are authorized by law, the restraint on disclosure of trade secrets and other proprietary business information incorporated in 18 U.S.C. 1905, is not applicable to the report.

I believe that back when the GAO did contract audits—they don't do them anymore—they did hold very strongly to that position.

You see, the thing that's not emphasized by the procurement community, when they recite 18 U.S.C. 1905, there are two things.

One is that the information in question must first be a trade secret. And I think we can show conclusively that the kind of information we're talking about is not a secret at all, much less a trade secret.

Second, they ignore the clause which says, "except as authorized by law."

The fact is that the Department of Defense is not only authorized by law, they are required by law to collect and make use of cost and pricing data.

Senator PROXMIRE. Now, you say, in your letter to me of August 16 of this year, that the military staff in Air Force headquarters misinterpreted your and Mr. Parfitt's request for pricing data. And that the figures for at least one of the six contractors were incorrect.

Do you know whether the incorrect data understated or overstated the price markups? By how much? And which of the six cases are you referring to?

Mr. FITZGERALD. We're referring, Mr. Vice Chairman, to the data from Boeing, Wichita, KS, which we know for sure was understated. The figures we gave to you were low. The subsequent information——

Senator PROXMIRE. Do you know by how much?

Mr. FITZGERALD. Yes. On a cost basis, approximately, the figures that we gave you were approximately five-sevenths, 55 percent of what the true figures should have been. On a price basis, it's somewhat larger.

So the true figures were quite a bit higher than the ones that we were provided and subsequently reported to your subcommittee. I'm still not clear whether I can talk about the actual figures or not, without running the risk of prosecution by the Justice Department.

But, in the course of your staff's investigation into the matter, we did make available to the staff those actual figures.

Senator PROXMIRE. When did you first learn about misleading data, and what did you do about it?

Mr. FITZGERALD. We had a suspicion of it, Mr. Vice Chairman, at the time we received the data. And I think we alluded to some misgivings we had, Mr. Parfitt and I, in our testimony of last year. And we began immediately making inquiries, both formally and informally, to find out not only where we had received bad data, but also to find out where the countermanding instructions came from.

Senator PROXMIRE. I'm asking that a chart be put up here. I want to direct your attention to the chart, showing the price markup on Pratt & Whitney's TF-30 engine. This table comes out of a report prepared by Mr. Parfitt and shows that the markup goes from $10 for a standard labor hour's worth of work, to $210.98. That's writing in the cost of overhead, labor and efficiency, and profit.

How does that markup compare to the markups you testified about last year?

Mr. FITZGERALD. At the risk of going to the slammer, Mr. Vice Chairman, that's one of the items we testified to last year. It was unidentified at the time, but we had a later year figure in slightly different formatting in the data that was presented to you last year—slightly lower, I might add, which was moderately good news.

But the $200 per standard hour is fairly typical of what we find in large contractors. Pratt & Whitney became somewhat notorious, starting in 1982, for enormous price increases and absolutely astonishing unit costs for spare parts, which is what generated not only Mr. Parfitt's study, of which this is one page, but numerous other inquiries as well, including the "20/20" program, which was aired in March 1983, which I think gave great impetus to the avalanche of spare parts horrors.

What the Parfitt report showed was that the spare parts horror stories were not isolated anomalies. They were not just examples of the system breaking down. They showed rather that the markups on the ridiculously priced spare parts were a reflection of overpricing generally.

This particular chart you have here is the negotiated markup for an entire product line, the TF-30 engine. That's the engine that you may recall was made famous by our late friend, Mr. Gordon Rule, who did an outstanding cost study on it in 1967.

This is not a new product. It does not stretch the frontiers of man's knowledge, or anything of that sort. It's been manufactured for more than 20 years; it's used in the F-111 series of airplanes, the A-7 and the F-14.

Senator PROXMIRE. Could you summarize that chart for the lay person, including the rather slow and dull Members of the Senate? It's very hard to understand. It's so complex. There are so many figures there, and they're so small, that it's hard to look at that chart and get any impression at all.

Tell us what it means.

Mr. FITZGERALD. Surely. Could I approach the chart, Mr. Vice Chairman? I'm having a little difficulty reading some of the numbers at this angle.

Senator PROXMIRE. Surely. Well, that's the problem. Nobody else can read them.

Mr. FITZGERALD. I will deal with the labor side. The cost estimating is done in the real manufacturing world by making bills of material, this column here, and bills of labor, usually priced in "should take" hours, which we industrial engineers call standard hours.

Then we have the markups that go on top of those to finally arrive at total price. I'll talk about labor only.

Our stated hour's worth of labor is presumed to cost $10 in this chart which your staff has. That's the "should be cost" for doing the work in the factory, in light of what it should cost to do an hour's worth of work.

We have inefficiency of about 33 percent. So they multiply it by 1.3.

Senator PROXMIRE. They actually call that "inefficiency"? Or is that labor variance there?

Mr. FITZGERALD. Yes, it's an adverse variance.

Senator **Proxmire**. But all operations have inefficiencies, don't they? You can't get any that are operated at 100 percent efficiency?

Mr. **Fitzgerald**. Yes. A 100 percent of normal is typically met in competitive commercial industry and incentive operations, they typically work at 120 or 130 percent of normal.

The Japanese, unfortunately, using our labor standards, work at 137 to 150 percent of normal, according to the reports we get from the American Institute of Industrial Engineers. The notion of efficiency is not a good one to apply. It's a percent of normal, not the ultimate that you can achieve.

We have a sizable amount of scrap degree work. It's called the theory of labor cost variance. Then, the total of the work that we estimated should cost in the machine shop $10 ends up costing us, coming out of the machine shop, $26.

Interestingly, this 38 percent of normal output in just the factory itself is almost identical to what Mr. Rule found 18 years ago.

On this particular product line, this means that the blue collar portion of the factory is still very bad, but not getting any worse, which I guess is moderately good news.

Then we come to the really bad news. For this $10, we now have manufacturing overhead of $114; that's added on. In most cases, this is mostly indirect labor. That is, the supervisors, the managers, then the top people, what Dr. Amlie calls "the Gucci shoe set."

Then we have various other add-ons for total production costs, administration, additional administration, general administrative costs of another $4.

One of the things that Mr. George Stanton, the auditor in West Palm Beach was grinding on was taking the order. In this case, the division which we don't think does much of anything but take the orders for spare parts charged $16 to take the order for 10 dollars' worth of standard work.

Senator **Proxmire**. I beg your pardon. You were just going to say: All firms have overhead and they had to charge that overhead, of course, to their hours, with their charges.

The question is whether or not this overhead is excessive. It seems to be, the impression would be, that it is. But how does this compare with the overhead in the private sector on similar work?

Mr. **Fitzgerald**. Last year, Mr. Bruce Hahn, of the Machine & Tolling Association, testified that his member companies would do this kind of work, high-quality machine shop work—and I'm subject to being corrected on my recollection—I believe it was $35 to $52 per standard hour, as compared to $207 for this rather typical figure.

I want to emphasize that this figure for Mr. Parfitt is not outlandish in the world that we live in.

Senator **Proxmire**. This is six or seven times higher than it would be if it were done in the typical private sector operation, where you have competition?

Mr. **Fitzgerald**. That was the testimony, and I believe that to be fairly accurate, Mr. Vice Chairman.

Senator **Proxmire**. Thank you.

Now, Mr. Fitzgerald, you have stated before that the cases of high-price markup that have been disclosed, such as the hammer and the toilet seat and the ashtray, and so forth, are not isolated examples, but they are symptoms of a basic problem; namely, that all prices negotiated by the Air Force contain similar high markups.

How do you know that?

Mr. FITZGERALD. I'd like to amend that just slightly, if I may. I think that's true to some degree with prices negotiated with the giant firms, because the overhead rates are negotiated across the board for product lines, for divisions, for labor, for overhead pools. Whatever runs through that shop gets the same markup.

The same with the compensation rates, Mr. Vice Chairman. We formerly had systematic efforts that were proposed by our office to make separate attacks on each one of these cost elements. The compensation rates with the special emphasis on executive pay, the labor hours. And we're still continuing that, at least in the factory.

We had a major effort started, Mr. Parfitt and I, to attack overhead generally. But that was aborted by our then boss. We find that the same markups are applied to whatever work goes through the shop.

And so, if you will negotiate excessive markups, everything that runs through the shop will be overpriced.

Senator PROXMIRE. I now want to show you some parts that the staff helped the subcommittee obtain. There are parts purchased for jet engine overhauls. One is called an eyebolt. It looks like a large screw, 2 inches long, with a flat vertical head with a hole in it.

It is for the C-135 and the Air Force bought 46 of them in 1982 from Boeing for $7,491 or $162.85 each. A little screw with a litle hole in the end of it.

The second part looks like a metal bar 5 inches long, 1¼ inches wide, with two brass-colored screws going through it. It looks very simple; I understand it's for the AWACS.

In 1984, the Air Force bought four of them from Boeing for $5,013 or $1,253 each.

Now, for $1,253 each, you can get a beautiful VCR. Is that what they call them? I don't have one; I can't afford it.

Mr. FITZGERALD. I'm in the same boat, Mr. Vice Chairman.

Senator PROXMIRE. At any rate, you can get a very elaborate TV that can show you all the kinds of programs that you missed, and all that kind of thing.

And for this simple item: $1,253 each. Now, do these prices of the screw that cost $162, and this little plain metal part that costs $1,253, do those prices seem as outrageous to you as they do to me? And how do you explain them?

Mr. FITZGERALD. They certainly do seem outrageous. I can't explain them just based on what you've shown me here. But, I must say, they are not atypical. The Air Force's own industrial engineer, Ompal Chauhan, who has testified before Senator Grassley's subcommittee, has been digging up these kinds of horror stories at Boeing in Wichita, KS, for several years now. We've tried to support him in his efforts. And, to some extent, I think we've been moderately successful.

But, the immediate cure, we think, in our office for small parts like that is competition. And Dr. Amlie, who, unfortunately, couldn't be here, has worked very hard for the last several years with SBA and other people trying to promote their cause, to permit smaller, more efficient firms, to bid for these items.

We find that SBA has been a wonderful help to us. Unfortunately, we're just nibbling around the edges of the excess costs. If we're going to get at the great mass of excessive prices—for example, at Boeing in Wichita, KS—we have to say the magic word. It's the across-the-board markups, the magic word being "no."

[The following documentation was supplied for the record by Mr. Fitzgerald:]

DEPARTMENT OF THE AIR FORCE
WASHINGTON, D.C. 20330

OFFICE OF THE ASSISTANT SECRETARY

16 August 1985

Senator William H. Proxmire
Chairman, Senate Subcommittee
on Economic Resources,
Competitiveness, and Security
Economics
G-01 Dirksen Senate Office Bldg
Washington, D.C. 20510

Dear Senator Proxmire:

As you know, Richard Kaufman has been holding open the record of your hearings of last fall in hopes that Mr. Parfitt and I would receive a response to our request for legal guidance regarding the warnings we were given by the Air Force General Counsel's Office and by the Legislative Liaison Office prior to our testimony.

As you may recall, Mr. Parfitt and I were cautioned by both General Counsel and Legislative Liaison about possible violation of the criminal code, specifically 18 USC 1905, if we responded fully to your questions at the hearings.

Prior to the hearing and several times subsequently, we requested answers to the questions raised by the General Counsel and Legislative Liaison with respect to possible criminal sanctions against us.

I am attaching a copy of my October 9, 1984, request for legal guidance. I have never received a substantive response. Now, Mr. Kaufman tells me he can no longer hold open the record and he must go forward with printing the transcript of the hearings. I am grateful for your holding the record open for so long and apologize for our inability to get specific, unequivocal answers to the questions raised so threateningly against us. Although I am not a lawyer, my own research, both before and after last fall's threats, has convinced me that the proposition I suggested in my request for legal guidance is correct - namely, that the cost and pricing data in question is by no means secret and therefore cannot qualify as a trade secret. Only the taxpayers are being kept in the dark.

I also must report to you that the dollars per standard hour figures contained in the attachments to our testimony may be understated in some cases. It appears that the military staff in Air Force Headquarters "interpreted" Mr. Parfitt's specific data requests to the field in such a way as to mislead at least some of the plant representative people charged with compiling the data. In one case, I was told by Air Force representatives at a contractor plant that the Air Force had instructed the field to substitute actual manhours for the standard manhours Mr. Parfitt had requested in his data call. If true, this would mean that the numbers which we were given and subsequently presented to your Subcommittee were in error by the ratio of actual to standard hours. Since all the contractors we were dealing with were working below normal labor realization in their factories, this would mean that the figures we testified to were low -- perhaps by whole number factors. For example, if $100 per standard hour of output in our testimony turned out really to be $100 per actual hour expended, and the contractor was working at 50% of normal realization, then the true cost per standard hour would be $200 per standard hour rather than the $100 we testified to.

Unfortunately, we have a real rebellion on our hands amongst the military procurement people regarding work measurement and use of standard hour statistics. As my former boss put it -- a "Blue Curtain" has descended about the subject.

It is increasingly difficult to get meaningful, timely information on the subject through the military staff. Nevertheless, we intend to keep trying because we are convinced that the use of the should-cost approach in general and work measurement statistics in particular can show the way to defending the country without bankrupting the taxpayers.

Sincerely,

A E Fitzgerald

A. E. FITZGERALD
Management Systems Deputy

Attachment

DEPARTMENT OF THE AIR FORCE
WASHINGTON 20330

OFFICE OF THE ASSISTANT SECRETARY

9 October 1984

MEMORANDUM FOR SAFGC
SAFLL

SUBJECT: Legal Guidance

On 5 October, my associate Colin Parfitt and I had conversations with LCol John Cox (LL) and Mr. Dee Timmons (GC) regarding possible restrictions on the testimony which Mr. Parfitt and I are scheduled to present to the Joint Economic Committee tomorrow. Mr. Parfitt and I were cautioned about possible violation of the criminal code, specifically 18 USC 1905.

While I am grateful for the warning, I need some specific, unequivocal answers to the questions your offices have raised -- especially with respect to criminal sanctions. This is the reason I requested on Friday that Mr. Parfitt and I be given a legal memorandum which would, among other things, describe the criteria for a trade secret involving cost and pricing data on negotiated contracts. When I was more closely associated with such matters, prime contractors on negotiated contracts who were, in turn, negotiating with subcontractors were required to obtain cost and pricing data from the subcontractors. In addition, the GAO had access to cost and pricing data and could pass it on to Congress, as authorized by law. Finally, there is no way to erase cost and pricing information from the memories (or records, for that matter) of government employees when they leave the government and go to work for contractors. Therefore, it was not clear to me just who was being kept in the dark on cost and pricing data other than the taxpayers. If information is not truly secret, it is unclear to me how that same information could qualify as a trade secret.

Since Mr. Timmons was not sure how or in what form our prime contractors on negotiated contracts obtained needed subcontractor cost and pricing data, I asked him to include in his memo examples of cost and pricing data obtained by Rockwell on B-1 negotiated contracts and by General Dynamics on F-16 negotiated contracts. I further suggested that the requested B-1 and F-16 information could be forwarded in unedited form by datafax.

I would greatly appreciate having the information I requested last Friday available this evening so I can prepare for my appearance tomorrow.

A. E. Fitzgerald

A. E. FITZGERALD
Management Systems Deputy

Copy to:
SAFFM
SAFFMA

DEPARTMENT OF THE AIR FORCE
WASHINGTON, D.C. 20330

OFFICE OF THE SECRETARY

FMM
Halvorsen required by
03. Col [illegible]

28 December 1982

MEMORANDUM FOR RECORD

SUBJECT: Trip Report - Visit to Pratt & Whitney, East Hartford, CT, to Review Spare Parts Pricing, 29 October 1982

Air Force personnel visiting Pratt & Whitney (P&W) on behalf of SAF/FM were:

Colin Parfitt, SAF/FMM
James McElhany, AF/ACF
Joyce Lucky, AF/LEXM
Guy Infante, AFLC/MAS

P&W personnel contacted during the visit are listed in Atch 1. Other AF, Defense Logistics Agency (DLA), and Defense Contract Audit Agency (DCAA) personnel contacted during the visit are listed in Atch 2.

The purpose of the visit was to obtain some understanding of P&W's cost accounting system and pricing methods for spare parts sold to U.S. Government agencies, with the objective of assisting the ASAF/FM in taking a position with respect to spares pricing in general.

Company representatives provided a lengthy overview of the P&W standard cost accounting system. Copies of the briefing charts used in their presentation are in Atch 3. In general terms, the system is elaborate, complex, and extremely detailed. P&W maintains both labor and material standards for some 50,000 parts, of which approximately 40,000 are active at any time. The term "active" indicates that there is some known requirement for production of the part.

Labor standards for parts are in terms of standard minutes of work content ("machining minutes") multiplied by average cost per minute by department, and as of 5 Oct 82 some 79.8% of the time standards were engineered standards. Material standards are maintained for all parts, of which some 80% are purchased, and only about 20% manufactured by P&W.

The standards are reviewed and revised by P&W on an annual basis, and are set as of January each calendar year. They are provided to the AFPRO and to DCAA representatives for review and approval. DCAA evaluates standard labor rates and the AFPRO provides to DCAA a technical evaluation of standard labor hours. Material standard costs are reviewed by DCAA.

READY THEN READY NOW

The standard costs for direct labor, and for direct material are multiplied by mark-up factors to determine prices for inclusion in P&W's current period Article Price List (APL). These mark-up factors are negotiated by the Principal Contracting Officer (PCO) at NAVAIR Contracts Office, NAVAIR Systems Command, for the Navy BOA; and by the PCO at SAALC Contract Office, Kelly AFB, for the Air Force BOA. NAVAIR mark-up rates for calendar years 1982 and 1983 were negotiated in early 1982 and formalized in Change No. P00002, dated 31 March 1982; page 2 of that change is enclosed as Atch 4. The negotiations on material mark-up factors take a basis of $1.00 of standard direct material, or a $1.00 of standard direct labor, and recognize additive costs as shown in the following tabulation extracted from attachment 8.

PRODUCT LINE JG TF30-P-414 PECULIAR

	COST BASIS
Standard Material	$ 8,837,450
Standard Change	-200,281
Substitution	-30,379
Percent	-0.34%
Period Cost Variance	109,557
Percent	1.24%
Total Material Overhead Base	$ 8,716,347
Other Variances	624,716
Percent	7.07%
Material Overhead	499,939
Percent	5.74%
Total Material	9,841,002
Standard Labor	338,390
Labor Applied Variance	453,026
Percent	133.91%
Labor Period Cost Variance	101,589
Percent	30.03%
Total Labor	892,915
Manufacturing Overhead	3,882,777
Percent	434.84%
Shop Tooling	299,417
Percent	33.53%
Sub-Total	14,916,111
Inventory Adjustment	100,124
Percent	0.67%
Total Production Cost	15,016,235

PRICING BASIS	Material	Labor
Standard Material	1.000000	
Standard Change	-.022663	
Substitution	-.003438	
Spoiled & Defective	.012397	
Material Overhead Base	.986296	
Vendor Tooling	.036960	
Price Variance	.031663	
Other Variance (Balance)	.002066	
Total Material Overhead	.056571	
Total Material	1.113556	
Standard Labor		1.000000
Applied Labor Variance		1.339123
Period Cost/Labor Variance		.300293
Total Labor		2.639418
Manufacturing Overhead		11.477319
Shop Tooling		.885064
Sub-Total	1.113556	15.001801
Inventory Adjustment (1)	.007474	.100692
Total Production Cost	1.121030	15.102493

	COST BASIS		PRICING BASIS	
			Material	Labor
Specific Administrative	57,062	Specific Administrative	.004260	.057389
Cost of Sales	15,073,297	Cost of Sales	1.125290	15.159882
G&A Overhead	425,067	G&A Overhead	.031733	.427509
Percent	2.82%			
Total Mfg. Cost Less COM.	15,498,364	Mfg. Cost (Less COM)	1.157023	15.587391
Cost of Money	200,368	Cost of Money	.001841	.544194
Total Mfg. Division Cost	15,698,732	Total Mfg. Division Cost	1.158864	16.131585
EAPS Percent	1.6288%	EAPS Percent	1.6288%	1.6288%
EAPS Dollars	255,701	EAPS Mark-up	.018876	.262751
Sub-Total	15,954,433	Sub-Total	1.177740	16.394336
Warranty Percent	.2000%	Warranty Percent	.2000%	.2000%
Warranty Dollars	31,909	Warranty Mark-Up	.002355	.032789
Sub-Total	15,986,342	Sub-Total	1.180095	16.427125
Gov't. Overhead Percent	9.9400%	Gov't. Overhead Percent	9.9400	9.9400
Gov't. Overhead Dollars	1,589,042	Gov't. Overhead Mark-Up	.117301	1.632856
Sub-Total	17,575,384	Sub-Total	1.297396	18.059981
Cost of Money	28,462	Cost of Money Mark-Up	.002101	.029240
Total Cost	17,603,846	Total Cost Mark-Up	1.299497	18.089221
Profit Percent	15.0000%	Profit Percent	15.0000%	15.0000%
Profit Dollars	2,636,308	Profit Mark-up	.194609	2.708997
Total Price Mark-up	20,240,153	Total Price Mark-Up	1.494106	20.798218

(1) Write off to Dormant Stores

The tabulation above depicts the categories used by P&W for projecting costs and for tracking costs incurred.

On labor, the mark-up rates in 1982 range from a low of $15.25 per dollar of standard direct labor in Product Line FN, J 18 Peculiar, to a high of $28.58 per dollar of standard direct labor in Product Line SL, TF 33-PW-100 Peculiar. The labor mark-up rates by Product Line in 1983 vary slightly from those of 1982. These mark-ups are negotiated based upon details by cost element. The final mark-ups negotiated are based upon aggreements reached in consideration of rationales supporting standard costs and cost element projections, actual cost history by cost element through the settlement date, and recommendations provided to the PCO from DCAA and the AFPRO. Company representatives point out that they are required by law to disclose current costs, that their accounting system is one of constant flow, and their current posture derived from experienced actual costs (excluding unusual/nonrecurring events) is the basis for estimates of future costs which are a stepping-off point for negotiation discussions. They also note that every contractor's proposal for a follow-on lot, or buy, is predicated on his experience and dependent on the facts and circumstances that exist. It is interesting to note that the 1983 mark-up rate negotiated for Product Line SL rises to $29.485 and will apply to what were then unknown, and currently still are unknown, direct labor standard costs that P&W will set as of next January, and which in the usual course of events will largely be approved by DCAA and the AFPRO. Since my visit to offices at East Hartford, the company has negotiated a favorable union contract settlement for the coming three years, and asserts that direct labor standard costs to be set as of January 1983 will probably be lower than would have been the case if they were to have been set on the basis of labor cost projections made earlier in 1982.

The prices in the Article Price List (APL) are thus set each year based on P&W predetermined direct labor standard costs and direct material standard costs multiplied by the negotiated mark-up rates for labor or for material by product line. However, the Navy Basic Ordering Agreement (which was originally negotiated by the Navy about 1951) provides that APL prices apply only for the calendar year for which they are set and apply only to ordered items that are also scheduled for delivery in that specific calendar year. To the extent that items are scheduled for delivery in a calendar year subsequent to the year in which the order is placed and accepted they are repriced by P&W based on new direct labor standard costs and direct material standard costs set by the company in January of that year, and the negotiated mark-ups for the year of delivery. For example, mark-up factors for calendar years 1982 and 1983 were finalized in March 1982 (Atch 4), and for 1982 they applied to all open, scheduled 1982 delivery dates as of 1 January 1982, and any subsequently established deliveries scheduled to be made in calendar 1982. Enclosed as Atch 5 is an example of a DLA procurement from P&W. The company on 20 July 82 offered delivery of 721 bearings scheduled 145 per month in months 21 through 24, and 141 in the 25th month after receipt of order. Had this been an APL item ordered by the government under the terms of the Navy BOA (Contract N00383-81-G-1107) in July 1982, the scheduled months of deliveries would have been April 1984 through Aug 1984. Consequently, the July 1982 APL price would not apply. The order on hand would have been repriced by P&W based on their new direct labor standard costs and/or direct material standard costs and the negotiated mark-ups for 1983; and again repriced in the same way to reflect the new standard costs and negotiated mark-ups for 1984. Recent events in connection with the price increases of engine parts indicate that as a general rule the government does not have reliable knowledge as to what the ultimate cost of parts will be until notified of price changes by P&W. A DLA representative from the Defense Industrial Supply Center at Philadelphia, PA, who took part in the meetings at P&W on Oct 29, provided me a copy of his trip report (Atch 6). In pertinent part he notes on page 3, et. seq. that "...P&W lead times are at least double and in some cases three times longer than we are experiencing from the same manufacturers with whom P&W deals.... Most manufacturers, regardless of quantity, quote a firm fixed price in one delivery. The lengthy delivery by P&W over as many as four redetermination periods has the added effect of giving P&W four opportunities to change its prices. This is a needless waste of administrative effort and results in extremely erratic prices." Most of P&W's delivery times seem to be in the quite distant future, and I believe the example in the DLA procurement above is typical rather than atypical. Thus, absent some change, our future experience foreseeably could match that which has caused our recent and continuing concern. For the government to have reliable knowledge of the probable, ultimate parts cost would require the government requesting repricing estimates from P&W. Company representative told me they are willing to do this and have done so in the past when so requested.

One of the questions asked of the P&W representatives sought to ascertain what data the company collected or used pertaining to scheduling and average delivery times for some or all parts. P&W people had earlier asserted that they carry zero inventory of finished parts for sale to the government, but manufacture or procure all required parts in response to government orders. Since production must be scheduled to produce parts for delivery, and because it is necessarily prerequisite for P&W to know or to learn receipt times of purchased parts to be able to schedule their delivery to the government, relevant data especially on material costs exists or could be obtained to support a specific quotation rather than using the APL under the Navy BOA. In response to the question on average lengths of delivery times the company representatives said they did not know. However, every P&W part has a published lead-time and these lead-times are made available to government customers in the form of magnetic tape which is updated monthly. Company representatives also told me that they recompute lead times for every order received. Government buyers thus have the capability to review P&W's offered lead-times. In theory, if first delivery times were to be stretched beyond the end of the calendar year in which the order is received the company could effectively avoid the prices in the current APL, so that any overall actual cost increases or decreases already incurred and/or estimated to be subsequently incurred would be reflected in later repricings under subsequently established standard direct labor/material costs and mark-up factors. Company representatives assert that they stand by their published lead times with respect to orders that fall within their forecasts of production, and do not stretch-out proposed delivery dates. Since finished goods for delivery to the government are procured/manufactured only on the basis of orders recieved (contract in hand) everything is delivered, necessarily, at least lead-time away. Consequently, as a practical matter, the preponderance of deliveries under the Navy BOA occur in calendar years subsequent to the calendar year of P&W's acceptance of the order, and accordingly come under the repricing provisions which operate to reduce price risk to Pratt and Whitney and to increase cost-risk to the government. The seeming "horror stories" surfaced in the recently publicized OCALC/PMZ letter of 12 July 1982 to the AFPRO at P&W West Palm Beach (Atch 7), explained by P&W in their 16 November letter to me (Atch 8), are illustrations of pricing changes that can occur and which are financially disruptive to the affected government agencies.

During the mid and late-1970s the Company benefited under the repricing provisions when it delivered late, and articles were repriced as of delivery dates. The reflection of the then ongoing inflation in repricings as of the late delivery dates caused the Navy, at the request of AF buying activities, to insist upon a change to reprice as of scheduled delivery dates instead of actual delivery dates, regardless of whether actual deliveries were early or late. In an 8 October 1977 letter to the Navy's Aviation Supply Office in Philadelphia, accepting the change, the Company stated "...It must be noted that P&W AG-GPD believes that implementation of such a clause will increase cost to the Government..." Changes in circumstances in the interim have enabled the Company to make significant numbers of early actual deliveries, while benefiting from inflated repricings as of the scheduled delivery dates. Company representatives point out that they still have significant amounts of late deliveries. They claim that their annual assessments of "overdue at end of year" are:

31 Dec 1979	$70 million
31 Dec 1980	$56 million
31 Dec 1981	$44.5 million

However, it does not follow that the Company's lack of timely performance on some orders would justify "...repricing action showing a substantial increase a year or more after actual delivery..." (discussion of finding number four in attachments to OCALC/PMZ letter of 12 Jul 1982, Atch 7). Government representatives have requested modifications to eliminate the problem of early deliveries and subsequent repricings, and a copy of P&W's proposal for doing so is enclosed, letter dated 22 November 1982 to the Navy's Aviation Supply Office, Philadelphia (Atch 9). I understand that a similar change is in process for the AF BOA at SAALC.

Over the long term, and whether consciously intended or not, the provisions of the Navy BOA do in fact operate to effectively reduce cost-risk on the part of P&W. On the other hand, the government is placed in a position where, to the extent that it does not fully reimburse P&W's actual incurred costs plus profits in current payments for scheduled deliveries, it will reimburse those actual incurred costs plus profits when they are reflected in subsequently changed direct labor standard costs and direct material standard costs and renegotiated mark-up factors.

As already described, many of P&W prices for spare parts are based on actual costs incurred. Under the Basic Ordering Agreement, P&W may adjust their price to reflect incurred costs if the incurred costs turn out to be different from projections. Indeed- the predominant excuse used by P&W for large price escalations is: "Old price is not representative of cost." This explanation was used for 26 of the total of 41 part numbers whose price to the Oklahoma City ALC increased more than 300% in CY 1982 (Atch 8).

P&W deny they are beneficiaries of cost-plus-percentage-of-cost contracting, but there is no question that this is the case. In an explanation for cost increases furnished to the office of a U.S. Senator, P&W states flatly: "...The company bases its spare parts prices on actual costs..." That statement, coupled with the P&E derivation of prices depicted in the tabulation beginning on page 2 makes it very clear that, at least where repricing based on cost experience is involved, we are paying P&W for incurred cost plus 15% profit. Regardless of any legalistic loopholes and unique meanings of words which may be employed by defendants of the practice, the practical effect of the procedures employed is cost-plus-percentage-of-cost contracting.

Recommendations:

1. Air Force use of the Navy BOA should be completely discontinued as rapidly as it is feasible to do so.

2. The government, or at least the Air Force, should negotiate parts requirements contracts with firm, fixed prices and guaranteed minimum procurements.

3. Change the basis of pricing. Prices should be established through meaningful competittion and/or analysis of what the products should cost under conditions of efficient production.

4. Pending the implementation of 2. above, and to the extent that they are not already doing so, Air Force Buying Activities should negotiate individual firm fixed price purchase orders with P&W rather than use the BOAs and the associated APLs.

Colin D Parfitt
COLIN D. PARFITT

Attachments

ATTACHMENT 1

Name	Organization	
Bob Davis V.P.-Contracts Negotiations	P&WA Group	
Mark Coren	P&W Manufacturing Division	V.P. Controller
Joe Love	P&W Manufacturing Division	V.P.-Counsel
John Marchei	" " "	Manager, Contracts
Gerry Krause	" " "	Manager, Mature Eng Prog
Fred Bossett	P&W Government Products Div	Bus. Mgr - MATURE ENG
Dick Horowitz	" " " "	Spare Parts Pricing
Art Wagner	Group Exec. V.P	
Neal Weddle	Group - V.P. - Finance	
Wm. C MISSIMER Jr	Group Exec. V.P.	

ATTACHMENT 2

NAME	OFFICE	PHONE
[illegible]	AFPRO-TMF	203-565-8560
Ed Lawton	AFPRO-Chief Contract Div	203-565-8559
John D Parfitt	SAF/FMM	202 697 3617
Joyce B. Lucky	AF/LEXM	202 697-9365
James V. McElhany	AF/ACF	(202) 697-9223
Guy W. Infante	HQ AFLC/MAS	513-257-7369
Al. Trauffer	DISC, Phila	215-697-3879
Gerard Mignano	DISC, Phila.	215-697-2513
Thomas W. Potter	DCAA Resident Auditor	203-565-8540
Col. Thomas J. Crawford	Dir Contract Mgt/AFSC	301-981-5801
LtCol David E Cain	AFPRO Dep Cmdr	203-565-8672
Lt Col David N. Repak	AFPRO-SD	203-565-5602
Robert E. Barnes	AFCMD/TMO	505-844-0866
Capt. Jeffrey P. Rohm	AFPRO/JA	305-840-2198
Frank A. Errato	DCAA/E. Htfd, Ct.	203-565-8540
Col J. M. Sysco	AF Plant Rep	203-565-8671

STANDARD FORM 36, JULY 1966 GENERAL SERVICES ADMINISTRATION FED. PROC. REG. (41 CFR) 1-16.101	CONTINUATION SHEET	REF. NO. OF DOC. BEING CONT'D ATTACHMENT 3

1. Pursuant to the provisions of Clause 103 of the above Basic Ordering Agreements, entitled "Determination of Contract Prices," the following Spare Parts Mark-up factors shall be utilized in determining the firm fixed prices for all articles contractually scheduled for delivery during the period 1 January to 31 December 1982 and shall also be used to prepare the Article Price List. Prices shall be established by applying these Mark-up Factors to the material and labor standards.

FIRM FIXED PRICE MARK-UP FACTORS FOR CY 1982.

	Domestic		FMS	
Product Line	Material	Labor	Material	Labor
CN	1.525616	21.341161	1.575412	22.037736
FN	1.342109	15,250874	1.385915	15.748663
GN	1.510074	19.520096	1.559363	20.157232
HM	1.412759	25.530325	1.458871	26.363635
JG	1.425660	20.770931	1.472194	21.448894
MM	1.431505	19.020217	1.478229	19.641037
SL	1.398541	28.578778	1.444189	29.511589
SM	1.591474	21.574554	1.643420	22.278747
XX	1.616303	16.219653	1.669059	16.749062
YY	1.535883	18.816328	1.586014	19.430493

2. The following Domestic Spare Parts Mark-up factors shall be utilized in determining the firm fixed prices for all articles contractually scheduled for delivery during the period 1 January to 31 December 1983 upon the establishment of the applicable material and labor standards and shall also be used to prepare the Article Price list. FMS Spare Parts Mark-up factors for Calendar Year 1983 will be incorporated in a subsequent modification.

FIRM FIXED PRICE MARK-UP FACTORS FOR CY 83

	Domestic		FMS	
Product Line	Material	Labor	Material	Labor
CN	1.419143	21.085191		
FN	1.372977	15.551104		
GN	1.460672	17.079600		
HM	1.436917	25.185887		
JG	1.452096	20.089929	(To be negotiated)	
MM	1.467580	18.062833		
SL	1.424016	29.485062		
SM	1.536867	20.962904		
XX	1.629409	15.831676		
YY	1.507556	19.176902		

3. DAR Clause 7-104.35(a), entitled "Progress Payments for Other than Small Business Concerns," as incorporated by reference into the above Basic Ordering Agreements, is hereby modified to change the progress payment liquidation rate specified in paragraphs (b), (a)(3)(ii) and (a)(4) thereof to 79.3% for FMS and 74.7% for Domestic orders against BOAs N00383-77-A-7102 and N00383-79-G-9102 and 83.5% for FMS and 79.3% for Domestic orders against BOAs N00383-80-G-0101 and N00383-81-G-1107.

(a) The alternative liquidation rate specified above shall only be applicable upon the ACO's determination that all the conditions of DAR E-512.2(b) have been met.

Mod. N00383-81-G-1107 81 July 06

D

P00002 31 March 82

ATTACHMENT 4

OVERVIEW OF P&WA ACCOUNTING SYSTEM

- STANDARD COST SYSTEM (VS. JOB ORDER)
- COSTS ARE ACCOUNTED FOR BY PRODUCT LINE
- ACCOUNTING SYSTEM ELEMENTS
  - STANDARD COST
  - APPLIED COST
  - PERIOD COST
  - OVERHEADS
  - SHOP TOOLING
- BALANCE SYSTEM
- MARK-UP FACTORS

EXAMPLE - BALANCE SYSTEM

	Beginning Balance	Input	Output	End Balance	Input %	Output %	End Balance %
Month 1							
Standard	10,000	1,500	1,200	10,300			
Variances-Applied	1,000	180	120	1,060	12.0	10.0	10.29
Per Cost	-	100	100	-	6.67	8.33	-
Month 2							
Standard	10,300	1,000	1,200	10,100			
Variances-Applied	1,060	120	123	1,057	12.0	10.20	10.47
Per Cost	-	67	67	-	6.67	5.58	-

STANDARD COST

PROCEDURE FOR ESTABLISHING STANDARDS

- PURCHASE AND MATERIAL
    - OPEN PURCHASE ORDERS
    - ESCALATED CLOSED PURCHASE ORDERS (1 YEAR ONLY)
    - PRIOR YEARS STANDARD
    - ADJUSTMENTS FOR "P.I.E." PURCHASE ORDERS
    - ADJUSTMENTS FOR CEILING PURCHASE ORDERS
- LABOR
    - MACHINING MINUTES
    - AVERAGE COST PER MINUTE BY DEPARTMENT

LABOR

WAGE PROVISIONS OF CURRENT CONTRACT

- GENERAL INCREASES - INCREASES FOR PRODUCTIVITY IMPROVEMENTS
- AUTOMATIC PROGRESSIONS - ORDERLY PROGRESSION WITHIN GRADE
- COST-OF-LIVING ALLOWANCES (COLA) - PROTECTS UP TO 6% ANNUAL INFLATION

STANDARD GROWTH

• 1980-1981	13.8%
• 1981-1982	11.9%

MATERIAL

BLS INDEX GROWTH

	WEIGHTS	1980-1981	1981-1982
COBALT	5%	0%	(20.0)%
TITANIUM	40%	32.3%	27.4%
NICKEL	20%	10.5%	(1.6)%
STEEL	19%	6.5%	13.4%
VALUE ADDED SIC 3724	16%	12.6%	13.0%
COMPOSITE		18.26%	14.24%

OVERHEAD RATES

	1980	1981	RATE* AGREEMENT 1982	YTD SEPTEMBER 1982
FACTORY	413.6%	433.8%	450.0%	439.1%
MATERIAL	5.4%	5.2%	5.5%	5.2%
GEN & ADMIN	2.40%	2.88%	2.63%	2.50%
BUSINESS BASE (EQUIV./ENGINES)	4,800	4,200		4,050

*RATE AGREEMENT IN EFFECT FROM 1/82 - 4/82

GOVERNMENT PRODUCTS DIVISION

ELEMENTS OF COST

- ENGINEERING ASSISTANCE TO PRODUCTION AND SERVICE (EAPS),
- WARRANTY
- GENERAL OVERHEAD
- PROFIT
- FACILITIES CAPITAL COST OF MONEY --

EXACTLY HOW ARE PRICES SET FOR SPARE PARTS?

THE FINAL PRICE OF SPARE PARTS IS SET BY MULTIPLYING THE FROZEN STANDARD(S) FOR EACH PART BY THE NEGOTIATED PRODUCT LINE MARKUP(S) FOR THE PART FOR THE YEAR OF SCHEDULED DELIVERY.

- STANDARDS ARE AUDITED BY THE USG
- PRODUCT LINE MARKUPS ARE NEGOTIATED WITH THE USG IN ADVANCE OF THE YEAR'S DELIVERIES

REPRICING PROCEDURE

- NEGOTIATE MARKUP FACTORS WITH USG PRIOR TO CONTRACT YEAR
- ESTABLISH FROZEN STANDARD COST AS OF 1 JANUARY OF CONTRACT YEAR
- ESTABLISH FIRM PRICE BY APPLYING NEGOTIATED MARKUP FACTORS TO FROZEN STANDARDS
- REPRICE ALL ORDERS SCHEDULED FOR CONTRACT YEAR AND SUCCEEDING YEARS
- ISSUE MODIFICATIONS REVISING UNIT PRICES AND TOTAL IMPACT ON EACH ORDER

Case 2436 ATTACHMENT 5

CONVERSATION RECORD

TIME:

DATE: 10/5/82

TYPE: ☐ VISIT ☐ CONFERENCE ☒ TELEPHONE ☒ INCOMING ☐ OUTGOING

Location of Visit/Conference:

ROUTING	
NAME/SYMBOL	INT

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU	ORGANIZATION (Office, dept., bureau, etc.)	TELEPHONE NO.
Dick Horowitz	Pratt & Whitney Pricing	305-840-7846

SUBJECT

Negotiations - ZPI 82153000648 on P/N 273827 Pratt & Whitney

Alternate Part No 277790

SUMMARY

Dick Horowitz called me re: subject ZPI negotiations. I told Dick that I had obtain information from DCAA re: purchase order prices, loadings and quotations and was prepared to give him an offer. However, we wanted to resolve the issue of delivery firs since this will have an impact on price. Based on the current lead time we are obtaining from TRW, the source on this bearing, a delivery of 13 months is considered reasonable for complete delivery. He said he would have to call back. I told him t a price in the amount of $80.00 is reasonable based on an 1983 delivery. Our delive is based on 1 month to place the order, 10 months for receipt of material and 2 mont for P & W to receive, inspect and ship the item.

Dick called back and gave a counter offer of $110.00. He confirmed the information had given him on the quotations. However he said the best he could do on delivery i 145/month starting in 14 months. He also stated that the figure I gave him did not clude Government Products Division Loadings. They only included East Hartford's Mfg Division Loadings. I told him I would confirm this with DCAA in Florida. I told hi the same time I would like a firm fixed price on the alternato part number 277790 an the same delivery. I knew the alternate was a lower price. However, I was not cert whether P & W could provide the item. Dick said he was not sure of the price. Howe he was certain that the original delivery of 145 ea. in 21-24 months and 141 in 25 months could not be improved. In the meantime, I determined that Mr. Horowitz was correct in that the Florida GPD loadings were not included in the original DCAA reco mendations. The following position was arrived at based on data provided by DCAA fr both locations on the alternate part number 277790. 12% profit was considered reaso able.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
G. D. MIGNANO	G. D. Mignano	21 Oct 1982

ACTION TAKEN

SIGNATURE	TITLE	DATE

UNITED TECHNOLOGIES
PRATT & WHITNEY
AIRCRAFT

P.O. Box [illegible]
West Palm Beach, Florida [illegible]
305/840-[illegible]

Government Products Division

In reply please refer to:
LJT/LMZ - CMS (72-262)

July 20, 1982

Defense Industrial Supply Center
700 Robbins Avenue
Philadelphia, PA 19111

Attention: H. Scott/PGBA/2

Subject: Request for Quotation ZPI82153000048
Dated June 18, 1982
Opening Date June 30, 1982

Please be advised that, with respect to the subject Request for Quotation we are quoting unit price and delivery F.O.B. Contractor's plant, East Hartford, Connecticut on the following:

Part Number	Nomenclature	Quantity	Unit Price	Delivery
273027	Bearing	721 ea.	$120.35	145 ea.in 21-24 mos. & 141 ea.in 25 mos.

Part number changed to optional P/N 273827 Bearing, NSN 3110-00-858-2462 which Pratt & Whitney Aircraft is currently supplying.

Delivery shall be made by the 30th day of the month(s), as above indicated, after receipt of an order in acceptable form.

This offer shall be open for your acceptance for a period of 90 days from the date of this offer.

Payment for items delivered shall be due and payable Net 30 days.

Please be advised that this material may be procured under BOA Contract F34601-81-G-0002. The Terms, Conditions and Certifications of such Contract will be applicable to any resultant order. However, if a Purchase Order is to be used, all other terms and conditions shall be those contained in the Aviation Supply Office/Pratt & Whitney Aircraft Group-Government Products Division Basic Ordering Agreement, N00383-81-G-1107 and all revisions thereto, in effect at the time such order is accepted by Pratt & Whitney Aircraft Group-Government Products Division.

Case 2436

ZPI 82153000648 on P/N 273827

1982 Frozen Standard	$45.54
1982, 1983 and 1984 escalation of 14.77%, 5.45% and 8.52% (cumulative)	14.27
	$59.81
Mfg. Division Mark-up	1.1124
Sub-total	$66.53
Govt. Products Div. EAPS .78%	.52
	$67.05
Warranty .0195%	.01
	$67.06
G & A 11.42%	7.66
	$74.72
Cost of Money .00175	.12
	$74.84
Profit 12%	8.97
PCB recommendation	$83.81

This position was discussed with R. Scott, Buyer, who concurred in it.

Since I didn't hear from Dick Horowitz I tried to call him on 10/19/82. He went to a meeting at OCAMA. However, I talked to Louise Stokes who was empowered to negotiate. Her counter offer was $83.31 and best delivery was 145 units per month starting 14 months to 17 months ADA and 141 18 months ADA. This delivery represents a substantial improvement over the original firm fixed price offer with delivery starting in 21 months. I accepted delivery but I countered with a price of $75.00 per unit. The lead time is in accordance with P & W's established lead time schedule.

Louise later called back with a best and final offer of $81.52. I accepted the price since it was below the price of $83.81 established above. The award will be made against the firm fixed price BOA and is considered a reasonable price. It represents a reduction of $27,996.43 from the original price of $86,772.35.

R. D. Migiano
DISC-PCB

ATTACHMENT 6

REPORT OF VISIT

DISC 24 (LIAISON VISITS)

TO: COMMANDER, DISC - P THRU: DISC-PC Gerard D. Mignano

ACTIVITY VISITED
Pratt & Whitney, Division of UTC, East Hartford, Conn.

DATE OF TRIP
FROM: 29 Oct. 82 TO:

PERSONNEL MAKING TRIP
Gerard Mignano, DISC-PCB Albert Trauffer, DISC-PTB

PURPOSE
* See below

Resume of points discussed and conclusions reached

ACTION	INFO	DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS IF APPROPRIATE

Background & Purpose of Trip

DISC personnel were invited by the Headquarters USAF, Financial Management to attend a meeting at Pratt & Whitney East Hartford, Connecticut, because we have been in the forefront in our objections to the Navy Price Redeterminable Contract, which practically eliminates all risk on the contractor's part. In addition, we were familiar with the contractor's accounting and estimating system which we have successfully challenged in the past. Furthermore, several Air Force Activities were recently requested to pay about $250,000,000 of extra costs for orders placed under the Navy BOA. The increase was not known by top USAF Management until it was leaked to the Press. The primary purpose of the trip was information gathering. The contractor was requested to give a briefing on their accounting and estimating system and to respond to a letter by Mr. Hancock of the Air Force. The letter contained a listing of over 30 items, whose prices had increased over 300% in the period of one year. DISC personnel had several additional objectives which were to discuss excess PLT quoted by P & W, how the Government can possibly control the price it pays for spare parts, and the possibility of making awards under the fixed price AF BOA.

Other Government Personnel

DCAA - T. Potter
F. Errato

Headquarters, USAF - C. Parfitt/FMM
J. Lucky/LEXM
J. McElhany/ACF

REPORT OF VISIT

NO.

DISC 34 (LIAISON VISITS)

TO: COMMANDER, DISC

ACTIVITY VISITED

DATE OF TRIP
FROM: TO:

PERSONNEL MAKING TRIP

PURPOSE

Resume of points discussed and conclusions reached

ACTION	INFO	DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS IF APPROPRIATE

Headquarters AFLC - G. Infante MAS

AFSC - Col. T.J. Crawford Director, Contr. Mgt.
AFCMD - R.E. Barnes TMO
AFPRO - Col. J.M. Syslo Cdr.
Lt. Col. D.E. Cain Deputy Cdr.
E. Lawton - Chief Contr. Div.
W. Shaw - TMF
Lt. Col. D.N. Repak SD
Capt. J.P. Rohm JA

Pratt & Whitney (P & W)
Mark Corin - V/P Controller Mfg. Div.
John Marchei - Mgr. Pricing, Mfg. Div.
Jerry Krause - Supervisor Pricing, Mfg. Div.
Fred Bassett - Business Mgr. Mature Engine Program GPD
Bob Davis - Group Vice President, Aircraft Group
Dick Horowitz - Supervisor Pricing GPD

1. Discussion of Objectives

a. The contractor adequately explained its standard cost accounting system on how standards are established, the types of variances applied to these standards and the elements of cost which comprise the price of an item. Charts were also presented showing in general how prices have increased in the past year. Pratt & Whitney's accounting system is not viewed as the major problem area by the DISC attendees. There appears to be no major violation of generally acceptable accounting procedures and practices.

REPORT OF VISIT

DISC 34 (LIAISON VISITS)

TO: COMMANDER, DISC

ACTIVITY VISITED

DATE OF TRIP
FROM: TO:

PERSONNEL MAKING TRIP

PURPOSE

Resume of points discussed and conclusions reached

ACTION	INFO	DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS IF APPROPRIATE

b. Regarding the Hancock letter, because of lack of time P & W gave detailed explanations on about 15-20 of the price increases.

Explanations for the entire list were categorized by P & W as follows:

(1) Errors of a clerical nature
(2) Acceptance of a Government estimate for parts not produced in recent times.
(3) Low volume, interrupted production runs
(4) Expedite orders
(5) Orders accepted based on historical estimates during a period when industry capacity was strained and critical materials were in short supply
(6) Engineering changes

After completion of the presentations, Mr. Parfitt was asked by P & W whether the explanations were satisfactory. Mr. Parfitt reserved any comments until he received the explanations from P & W in writing, and said he may be back for further explanations.

c. None of the DISC objectives were satisfactorily answered by Pratt & Whitney personnel. Regarding PLT, I contradicted a statement by P & W that lead times were decreasing. I mentioned that we were currently seeing the same lengthy lead times on a grilled delivery basis that we experienced several years ago when industry capacity was strained. P & W lead times are at least double and in some cases three times longer than we are experiencing from the same manufacturers with whom P & W deals. In very few cases are we quoted a grilled delivery by our suppliers. Most manufacturers, regardless of quantity, quote a firm fixed price in one delivery. The lengthy delivery by P & W over as many as four redetermination periods has the

REPORT OF VISIT

DISC 84 (LIAISON VISITS)

TO: COMMANDER, DISC

ACTIVITY VISITED

DATE OF TRIP
FROM: TO:

PERSONNEL MAKING TRIP

PURPOSE

Resume of points discussed and conclusions reached

ACTION	INFO	DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS IF APPROPRIATE

added effect of giving P & W four opportunities to change its prices. This is a needless waste of administrative effort and results in extremely erratic prices.

d. Any questions regarding the price redetermination contract, and the lack of risk on P & W's part, or the quantities upon which the standard prices were based, were dealt with hastily and the subject was quickly changed without satisfactory responses.

e. Relative to placing orders against the AF Fixed Price BOA, or receiving any quotation on a fixed price basis, P & W stated that a normal response time would be 60 to 90 days vs 45 days on the Navy BOA. Furthermore once an order is placed on the Redeterminable BOA, it cannot be cancelled. Although we were not satisfied with the answers, we did not belabor the points because time was growing short and the matters could not be resolved at that meeting.

Conclusion

1. My conclusions on the results of this meeting are the same as I expressed in the trip report dated November 15, 1977. This company is not willing to exercise any risk in its dealings with the Government either in price or delivery. As a result, we are experiencing unreasonable and unanticipated price increases and excessive PLT.

2. DISC, with its relatively low buying power, by itself cannot effect any major changes in the Pratt & Whitney system. However, working in conjunction with the Air Force, who does have the buying power leverage, drastic changes can and should be made.

REPORT OF VISIT

[illegible]

DISC 34 (LIAISON VISITS)

TO: COMMANDER, DISC

ACTIVITY VISITED

DATE OF TRIP
FROM: TO:

PERSONNEL MAKING TRIP

PURPOSE

Resume of points discussed and conclusions reached

ACTION	INFO	DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS IF APPROPRIATE
		3. Although Pratt & Whitney may have believed it satisfactorily explained the reasons for the exorbitant price increases of the items in the Hancock letter, in my opinion they only highlighted serious problems in their estimating system, which is approved by the Government. The Government in P & W's standard setting process does not necessarily receive the benefits of large quantity runs, because deliveries are unrealistically fragmented in various accounting periods. Quantities have more of an impact on price than inflation. 4. Until such time as official changes to the P & W system are made, an action plan has been developed within DISC-P to minimize the impact on DISC. Hundreds of thousands of dollars and greatly reduced PLT have already resulted by the action of PCB and the buyers. Enumerated below is the list of actions taken on major procurements with P & W.
P - S		a. Drawings on each item are researched to determine whether the items are truly sole source to Pratt & Whitney. If not proprietary they are submitted to DISC-S for competitive breakout.
P		b. If items are proprietary, they are solicited and awarded wherever possible on the fixed price AF BOA vs the Navy Redeterminable BOA. This latter contract should be avoided if at all possible because it eliminates all risk on the contractor's part. PCB with the cooperation of DCAA verifies reasonableness of price and makes recommendations for negotiations.
PI-PCB	PE PG	c. On those orders already placed on the Navy BOA, when substantial increases are experienced, DISC-PI has requested pricing assistance from DISC-PCB, who will again make a pricing verification and recommendation on reasonableness of price.

REPORT OF VISIT	[illegible] DISC 24 (LIAISON VISITS)
TO: COMMANDER, DISC	
ACTIVITY VISITED	DATE OF TRIP FROM: TO:
PERSONNEL MAKING TRIP-	
PURPOSE	

Resume of points discussed and conclusions reached

ACTION	INFO	DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS IF APPROPRIATE
PCB	PE PG	d. The DISC-PCB Market Research and Industrial Analyst, hired within the past year, has been highly successful in increasing the industrial base on many items originally purchased through end item manufacturers. Substantial amount of effort has been placed on breaking out P & W items.
AFPRO PI	PE PG	e. Prior to submitting a modification for either a price increase or establish the delivery schedule, the AFPRO should be required to investigate the causes of substantial increases and extended delivery schedules. The only work done on the mods by the AFPRO is a comparison of the price on the mod to the APL and a pass on the delivery without comment. It is then necessary for PCB to request further documentation from DCAA to establish reasonableness of price and delivery.
PCB		5. I have made a commitment to Mr. C. Parfitt SAF/FMM that I will submit a Beneficial Suggestion, as soon as possible, which will recommend substantial changes in the way all Government activities do business with Pratt & Whitney. It will cover the entire gamut from type of contract, how standards are set by the contractor, and how the standards are evaluated by the AFPRO/DCAA Offices. It will also enable the Government to become aware of unreasonable price increases and take corrective action before standards are set and the Government is "locked in". If this suggestion is adopted either in whole or in part, it will easily save the Government $100,000,000 to $500,000,000 a year in spare parts purchases from Pratt & Whitney.
		Encl

COPY TO CODE: DISC-P S PI PE DISC-PG	SIGNATURE (DIRECTOR OF PREPARING OFFICE/DIRECTORATE) DON R. WELLS Col.USA Dir. Dir of Con. & Prod	DATE 11-29-82
	NOTED (COMMANDER)	DATE

DISC FORM 215

ATTACHMENT 7

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS OKLAHOMA CITY AIR LOGISTICS CENTER (AFLC)
TINKER AIR FORCE BASE, OKLAHOMA 73145

12 JUL 1982

REPLY TO ATTN OF: PMZ

SUBJECT: Contractor Purchasing System Review (DAR Sup No 1)

TO: AFPRO Pratt & Whitney Aircraft Group
Government Products Division
P O Box 2691
West Palm Beach FL 33402

1. As we discussed Friday, I am forwarding a number of examples, (tip of the iceberg) documenting our concern with Pratt Whitney Aircraft's pricing practices. I am also inclosing a number of observations in narrative form which describe the economic inpact of those practices on the Air Logistics Center.

2. The additional dollars required for FY82 repricing has now reached something on the order of $140 million. PWA's estimate to reprice only the $40 million or so for which standards are not yet available is nearly 35 million dollars. Incredible!

3. There may be many reasons for the prices we are experiencing but in my judgment the major contributor has to be the redeterminable BOA's this contractor has enjoyed since day one. PWA has never had to learn how to control cost or operate efficiently. It will be difficult for them to change.

4. Since 80% of the parts we buy from PWA are vendor produced, the CPSR program is even more important. I request that you initiate the most thorough and extensive review the Detachment can conduct and posthaste. Concurrently, we should consider how and by whom the price reasonableness determination is made. We have an absolute mandate to make those determinations and I don't believe that is being done.

5. I don't believe the importance of this pricing problem with PWA can be overemphasized and I look forward to meeting with you in the near future, as you suggested, for more detailed discussions.

FOR THE COMMANDER

ROBERT S. HANCOCK, Deputy Chief
Commodities Division
Directorate, Contracting & Manufacturing

2 Atchs
1. PMD Ltr 24 Jun 82
2. Pricing Listing

Cy to: OC-ALC/PM & PMD

HEADQUARTERS OKLAHOMA CITY AIR [illegible]
TINKER AIR FORCE BASE OKLAHOMA 73145

REPLY TO
ATTN OF: Maj Nelson

24 JUN 82

SUBJECT: Review of Pratt-Whitney Re-pricing Procedures

TO: PMD/Mr Schultz

Attached are findings from my review of all 1981 and 1982 re-pricing modifications accomplished IAW clause 104 of the Navy BOAs, as well as selected contract files which met certain parameters such as percentage of price increase, dollar volume of shipped vs unshipped items and absolute unit price. The AMIS system was used extensively to identify items shipped ahead of scheduled year, i.e. year of last authorized re-pricing. Work papers are also attached and identified with a specific finding number. Some contract files which are cited as examples are also enclosed.

John M. Nelson
JOHN M. NELSON
Maj USAFR

2 Atch
1. Findings
2. Work Papers

TO: PM - Information

28 June 1982

With $451 million currently outstanding on the Redeterminable BOA, these findings indicate some corrective action by the AFPRO is in order. The AFPRO is under the impression that because ASO negotiates overhead, material and labor factors and because the auditor approves the standard cost system there is nothing left for anyone else to do. There still remains the problems of administrative errors, overpricing and who actually makes the required fair and reasonable determination before dollars are obligated.

John W. Schultz
JOHN W. SCHULTZ/PMD

vf/ltr.203

AFLC - Lifeline of the Aerospace Team

FINDING 1

The Air Force stock fund position is severely impacted by re-pricing actions of substantial value, which do not always appear fair and reasonable, and which necessitate increased obligations.

DISCUSSION

Due in part to inadequate pricing information for PR's and orders, the initial unit price is often meaningless. The price established in AFPRO's conforming mod often indicates this same price. Then, in future years' re-pricing actions, unit prices increase over 300 % and more, far more than inflation could justify, requiring obligation of substantial additional funds.

Example: N00383-79-6-9102, SDV9, item 4 ($825.24 to $2,506.89); TAN1, item 1 ($1,947 to $7,143.15); N00383-80-6-0101, SDG4, item 7 ($273.67 to $735.07); SDV9, item 16 ($374 to $2,238).

RECOMENDATION

All applicable data bases at the ALC (e.g. D033, J023) should be updated as much as possible with the latest price available. AFPRO Pratt-Whitney should insure that: 1) conforming mods utilize the best price available; and 2) unit price increases proposed for re-pricing mods are justified, with particular emphasis on very large increases.

FINDING 2

The preceeding problem is sometimes compounded by large decreases in the next years re-pricing action, indicating funds have been unnecessarily obligated for one year or more.

DISCUSSION

Due to what is probably an error in Pratt-Whitneys price from the prior year's re-pricing action, prices are decreased to a level more in line with that from two years prior. Therefore, millions of dollars have been tied up and unavailable for other AF requirements with no justification. Further, progress payments may have been made against these apparently erroneous prices.

Example: N00383-79-6-9102, SDP3, item 11 ($453.89 to $2,057.72 to $782.98); SDHG, item 1 ($98 to $510.98 to $134.81) and item 2 ($130 to $747.97 to $201.80) Note: The total unnecessary obligation on order SDHG alone exceeded $3 million; N00383-80-6-0101, SDP3, item 3 ($.10 to $1.17 to $.15); SDD2, item 1 ($1,137 to $4,677.96 to $2,067.69)

RECOMMENDATION

AFPRO Pratt-Whitney should review re-pricing mods more carefully and investigate the cause for a large price decrease, following a large increase, which has needlessly tied up AF funds, and be prepared to advise the ALC of corrective action taken. Some prices, such as N00383-79-G-9102, SDV2, item 1 (originally priced at $1,203.88, conformed at $16 and re-priced to $3,033.82) are obvious errors and should not leave the AFPRO without being straightened out.

FINDING 3

The "trade-off" modifications issued by PMDO are of dubious value when used on orders against the price-redeterminable Navy BOA.

DISCUSSION

The concept of trade-off mods to extend certain items as consideration for accelerated delivery of others has been widely used in all ALCs with sole-source contractors. It is difficult to establish procedures to make this concept function when using a price-redeterminable BOA since items are re-priced through the year of scheduled delivery. A method was developed whereby the year of delivery would be designated at the sub-line item level (AA = 1980, AB = 1981, etc). The sub-line item is changed during trade-offs to reflect the new delivery year. In practice this causes some thorny problems, examples of which follow:

The contractor responds negatively to requests for acceleration, then ships ahead of schedule and subsequently re-prices long after shipment (more on this issue in next finding) Example: N00383-79-G-9102, SDP7, item 8.

The contractor is in the process of shipping, or has made substantial shipments, against an item when it is proposed for a trade-off candidate. The items already shipped do not enter into the agreement and are therefore re-priced IAW their original designation. The problem is compounded when, due to the mod being in process, shipments continue under the original (now technically erroneous) sub-line item designator and, if not discovered, will be re-priced and paid at the later, and normally higher, prices: Example: N00383-80-G-0101, SD3G, item 3.

The contractor proposes an item for extension, and it is accepted, thereby becoming eligible for additional re-pricing, the amount of which is unknown at the time of the trade-off. Perhaps the worst case of this is the example cited, where the extension allowed re-pricing of an item from $35,189 to $190,855 each. Example: N00383-79-G-9102, SDQ2, item 1.

Items are proposed for acceleration by the contractor which have apparently not been expedited. Including these in trade-offs is of questionable value to the government, and the prior paragraph details a worst-case example of what we are giving up in return. Example: N00383-79-G-9102, SDR3, item 3.

RECOMMENDATION

The trade-off procedure, as it is being utilized with Pratt-Whitney, should be closely examined for value being received by the AF. As we get away from the Navy BOA and begin only using the fixed-price Air Force BOA, trade-offs should become a more viable way to do business.

FINDING 4

A considerable number of line items are re-priced after delivery, raising the issue of how such prices could be determined to be fair and reasonable since no further expense has been incurred.

DISCUSSION

The language of the clause in the Navy BOAs allows price redetermination through the year of scheduled delivery. When actual delivery, whether desired by the ALC or not, preceeds scheduled delivery by a substantial amount, and re-pricing occurs after the fact, one wonders what could be the basis of this re-pricing action. If early shipment was not desired by the ALC, we also incur added storage costs. Granted, in large plants using standard costs and automated accounting/reporting, it may be some time before the true cost of an item is determined. But a re-pricing action showing a substantial increase a year or more after actual delivery deserves to be questioned. Example: N00383-80-G-0101, SCS2, item 1 ($834.39 to $1,219.49, deliveries began over a year prior to schedule); SDBG, item 21 ($543,80 to $1,528.20, deliveries completed several months prior to beginning of schedule)

RECOMMENDATION

The language in the BOA clause should be changed to indicate re-pricing can be accomplished until year of scheduled delivery or year of actual delivery, whichever is earlier. Failing in this, the legality of the government agreeing to the existing clause should be investigated.

vf/ltr.201

Correction issued @ 4500.00 [illegible]

ITEMS INCREASING IN PRICE MORE THAN 300% (CY82)

[illegible] adjustment

Contract/Order	L/I	P/N	NSN	Old Price	New Price
9102/SDJ9	0004AB	566819	2840 00 949 0499PQ	$1,842.97	$ 6,712.27
9102/SDJ9	0003AB	659499	2840 00 413 0809PQ	$8,453.00	$30,772.47
9102/SDJ9	0006AB	768783	2840 01 065 1389PQ	$4,705.00	$19,850.32
9102/SDK2	0010AB	737122	2840 00 426 2151PQ	$1,321.04	$ 3,977.48
9102/SDK7	0007AB/AC	516093	2840 00 225 5382RT	$1,827.32	$ 7,014.77
9102/SDP3	0011AB	638010	2995 00 241 2212RU	$ 453.89	$ 2,057.72
9102/SDS1 disc	0002AC	703310	2840 00 765 6767RY	$1,634.00	$ 5,535.70
9102/SDUB	0008AB	282072	2995 00 340 2190RU	$ 153.29	$ 1,014.43
Old E 9102/SDV2	0001AB	557129	2840 00 948 5129PQ	$ 16.00	$ 3,033.82
9102/SDV9	0004AB	765679	2840 01 085 4675PQ	$ 835.24	$ 2,506.89
[illegible] E 7102/TA4R	0003AB/AC	702824	2840 00 009 4300RU	$1,759.00	$30,223.23
Old E 7102/TAK1 disc	0001AB	409208	2840 00 563 4650RT	$1,947.00	$ 7,143.15
0101/SDBH	0003AC	540534	2840 00 947 2480PQ	$ 123.00	$ 370.14
0101/SDBZ	0003AD	646805	4710 00 055 1219RV	$ 171.00	$ 586.55
[illegible] 0101/SDB1	0001AC/AD	707817	2840 00 617 7706PQ	$ 122.00	$ 395.51
0101/SDDY	0004AC/AD	510869	4010 00 943 3329PQ	$ 113.03	$ 375.93
0101/SDDZ	0001AD/AE	665550	2840 00 406 4045PQ	$1,137.00	$ 4,677.96
0101/SDEH	0002AC/AD	494559	2840 00 941 0936PQ	$ 271.78	$ 815.83
0101/SDEU	0001AD/AE	704817	2840 00 617 7705PQ	$ 122.00	$ 395.51
0101/SDFB	0001AC	510681	5306 00 939 2575	$ 4.44	$ 15.47
0101/SDG4	0007AB	350175	2840 00 659 8525RU	$ 273.67	$ 735.07
0101/SDHN	0001AC	356074	2945 00 674 0942	$ .44	$ 4.29
0101/SDH4	0001AB/AC	529740	2840 00 948 0968RY	$ 77.28	$ 1,016.70
0101/SDJT	0002AC/AD	578356R1	5320 00 833 9595RU	$ .24	$ 1.00

0101/SDM9	0003AC	429609	2840 00 898 7589RT	$ .10	$ 1.17
0101/SDV9	0018AC	452167	2915 00 015 6063RU	$ 374.00	$ 2,238.76
0101/SD03	0005AB	500889	2915 00 074 0431RV	$ 103.53	$ 691.74
0101/SD3V	0001AB/AC	412152	2840 00 169 0004PQ	$ 9.64	$ 34.97
0101/SD9D	0032AC	500714	4710 00 690 2064RV	$ 161.73	$ 493.84
0101/SD84	0003AB/AC	308862	2840 08 546 2940RT	$ 1.00	$ 13.91
0101/SD9T	0009AC	242746	2840 00 323 6447RU	$ .28	$ 1.97
9102/SDP8	0001AB	710772	2840 00 406 8427PQ	$4,963.00	$19,912.14
0101/SD9H	0004AB	773316	2840 01 083 8898RT	$ 504.02	$ 3,105.16
0101/SDR3	0001AB	572108	2840 00 927 8343PQ	$ 22.00	$ 125.89

*Although Small Price is involved, there are at least 140,000 of these on order.

ATTACHMENT 8

UNITED TECHNOLOGIES
PRATT&WHITNEY
AIRCRAFT

400 Main Street
East Hartford, Connecticut 06108

Manufacturing Division

November 16, 1982

Mr. Colin D. Parfitt
Secretary of the Air Force
Assistant for Accounting and Auditing
The Pentagon
Washington, D.C. 20301

Reference: Letter to AFPRO, Pratt & Whitney Aircraft Group, Government Products Division, from Robert S. Hancock dated 12 July 1982

Dear Mr. Parfitt:

In accordance with our discussions of 29 October 1982, I am submitting these data. I hope that this information clarifies some of the questions you and your colleagues posed at that meeting. In addition, I have included an assessment of the impact of prices for parts in question.

Attachment I represents our summary findings by part number and is structured in two parts. Part A corresponds to the listing of orders and prices appearing in the attachment to the referenced letter. Part B presents those orders referred to in the report attached to the referenced letter.

Attachment II displays deliveries against orders at prices assessed in Attachment I. Attachment IIC exhibits those deliveries for which restated final prices can be determined based on conditions prevalent at the time of pricing. You will note in reviewing Attachments I and II, the unfavorable impact of approximately $426,163 was borne entirely by Pratt & Whitney Aircraft Group.

Attachment III addresses the proposed Spare Parts Mark-Up factors for calendar year 1981 and the resultant negotiated values. Included in Attachment III for your convenience is a brief explanation of the derivation of the mark-up factors and a sample of their use in pricing spare parts.

If you have questions concerning any of the attached information or require further information, please feel free to contact me at (203) 565-2345.

Very truly yours,

UNITED TECHNOLOGIES CORPORATION
Pratt & Whitney Aircraft Group

M.S. Coran

M. S. Coran
Vice President - Controller

MSC:hb

Attachments:
I. Summary Findings of Part Prices
II. Deliveries of Parts at Unrepresentative Prices
III. Development of Mark-Up Factors

ATTACHMENT I

SUMMARY FINDINGS OF PART PRICES

LEGEND

ABBREVIATION	EXPLANATION
APL	Article Price List
OA	Order Acknowledgement
P.O.	Pratt & Whitney Aircraft Purchase Order Placed with Subcontractor
REPRICING MOD, 1981 $	Part Number Price Redetermination in 1981 Dollars

ITEMS INCREASING IN PRICE MORE THAN 300% (CY 1982)

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
566819	Support Assy.	$1,842.97 1980 APL	$ 6,712.27 1981 APL	Old price based on P.O. for $1,300.00 vendor price assumed to include material. P.O. supplement issued six days later correcting price to $4,500.00 to include material. In that interim standards were set and for this part material was not included in standard. New price based upon vendor price of $4,500. Old price is incorrect.
659499	Support Assy.	$8,453.00 OA 1980	$30,772.47 1981 APL	Old price was established on the basis of 1972 shop sourced costs nominally escalated to 1979. New price based on a purchase order placed competitively in 1981 for three (3) pieces. Part is constructed of Waspalloy a nickel base alloy. Old price is not representative of cost.
768783	Compressor Stator Assy.	$4,705.00 OA 1980	$19,850.32 1981 APL	In July 1974 and Feb. 1975, P&WA placed requirements of 36 and 22 pieces respectively with vendor J. T. Slocom Co. In May 1975, two cancellations were effected, the 22 pieces and three (3) of the 36 pieces. The vendor had material for four (4) more than the resulting requirements. These were sold against a requirement placed with the vendor in June 1977 at his original material cost plus current value added. The old price was based on this last activity and nominally escalated to 1979. New price based on a 1980 expedite P.O. for two (2) pieces. Old price is not representative of cost.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
737122	Pump Assy.	$1,321.04 1980 APL	$ 3,977.48 1981 APL	Price adjustment is attributed to three major components of this assembly. Gearshaft - Old price based on 1975 P.O. for 25 pieces escalated to 1980. Vendor had no capacity to accept new requirement, as a result a new vendor was selected based on competitive quotes for six (6) pieces. New price established on this basis. Cover - Old price based on 1977 P.O. for six (6) pieces escalated to 1980. Vendor refused to quote new requirement. New vendor selected on competitive quote for six (6) pieces. New price established on this basis. Housing - Old price based on 1977 P.O. for six(6) pieces escalated to 1980. New price based on competitive quotes for eight (8) pieces. Old price is not representative of cost.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
516093	Liner Assy.	$1,827.32 1980 APL	$ 7,014.77 1981 APL	Transmission of standard cost data for this part for spares pricing was incorrect. The old price was established on this data. Subsequent correction was not communicated on an exception basis. Old price, had it been corrected, would have been $6,080.33.
638010	Housing Assy.	$ 453.89 1980 APL	$ 2,057.72 1981 APL	Old price based on 1979 P.O. competitively awarded for 135 pieces. New price based on 1980 expedite P.O. competitively awarded for 27 pieces. Old price is not representative of cost.
703310	Disk	$1,634.00 OA 1980	$ 5,536.00 1981 APL	Material for the part is forged titanium. Old price is based on down part number shop sourced. Material was based on 1976 P.O. for 64 pieces. Costs for material were nominally escalated to 1979. Costs were incorrectly communicated for spares pricing; standard labor was considered as material and, as a result, improperly priced. New price based on buy source competitively selected in 1980 for 135 pieces. Old price is incorrect.
282072	Support	$ 153.29 1980 APL	$ 1,014.43 1981 APL	Old price based on 1979 P.O. competitively awarded for 40 pieces escalated to 1980. New price is based on a 1980 competitively awarded expedite P.O. for 24 pieces. Alternate raw material form was selected to meet schedule.

	Casting	Bar Stock (Alternate)
Cost	$151.66	$744.97
ARO	62 Weeks	32 Weeks

Old price is not representative of cost.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
557129	Ring	$ 16.00 OA 1981	$ 3,033.82 1981 APL	Old price in error, established on cost data for wrong part. New price based on 1980 P.O. competitively awarded for 20 pieces.
765679	Duct	$ 835.24 OA 1980	$ 2,506.89 1981 APL	Old price is a government supplied price which P&WAG accepted subject to redetermination, P&WAG had no old price. New price based on 1980 P.O. competitively placed for 20 pieces.
702824	Turbine Exhaust Case Assy.	$1,759.00 OA 1981	$30,223.23 1981 APL	Old price incorrect - Cannot ascertain basis for the price. New price based on 1979 P.O. competitively awarded for 39 pieces.
409208	Disk	$1,947.00 1980 APL	$ 7,143.15 1981 APL	Old price in error, raw material inadvertently exclude from cost base for spare parts pricing. Old price should have been $6,918.00. New price is based on 1980 P.O. for 50 pieces.
540534	Tube Assy.	$ 123.00 OA 1980	$ 370.14 1981 APL	Old price based on 1978 P.O. competitively awarded for 190 pieces escalated to 1980. New price based on 1980 P.O. competitively awarded to new source for 52 pieces In addition, for accounting and pricing purposes, part was assigned a different product line which caused an increase in mark-up factors to price. Old price is not representative of cost.
646805	Tube Assy.	$ 171.00 OA 1981	$ 586.55 1981 APL	Old price based on a 1974 P.O. for 63 pieces escalated 8% cumulatively to 1980. New price based on 1980 P.O. competitively awarded for 55 pieces to another vendor. Original vendor out of business. Old price is not representative of cost.
707817				Bad part number - Same national stock number as 704817.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
510869	Wire Rope Assy.	$ 113.03 1980 APL	$ 375.93 1981 APL	Old price based on 1979 P.O. competitively placed for 53 pieces. New price based on 1980 expedite P.O. placed with only vendor who would quote requirement. Old price is not representative of cost.
665550	Seal	$1,137.00 OA 1981	$ 4,677.96 1981 APL	Old price based on 1974 P.O. for 22 pieces nominally escalated to 1979. Part material is titanium. New price based on 1979 P.O. competitively placed for 10 pieces. Old price is not representative of cost.
494559	Tube Assy.	$ 271.78 1980 APL	$ 815.83 1981 APL	Old price based on 1979 P.O. for 18 pieces. New price based on 1980 expedite P.O. competitively placed for 14 pieces. Alternate material form requested to meet schedule.

	Forging	Bar Stock (Alternate)
Price		$618.50
ARO	44 Weeks	16 Weeks

Old price is not representative of cost.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
704817	Seal	$ 122.00 OA 1980	$ 395.51 1981 APL	Old price based on 1975 P.O. competitively awarded for 231 pieces nominally escalated to 1980. Part material is titanium. New price based on 1980 P.O. competitively awarded for 125 pieces. Old price is not representative of cost.

<table>
<tr><th>PART NUMBER</th><th>NOMENCLATURE</th><th>OLD PRICE</th><th>NEW PRICE</th><th>REASON/STATUS OF INVESTIGATION</th></tr>
<tr><td>510881</td><td>Bolt</td><td>$ 4.44
1980
APL</td><td>$ 15.47
1981
APL</td><td>Old price based on 1979 P.O. competitively awarded for 290 pieces. New price based on 1980 P.O. competitively awarded for 160 pieces. Part material is titanium. Below is summary.
<table>
<tr><th></th><th>Quantity</th><th>Unit Cost</th></tr>
<tr><td>5/79</td><td>290</td><td>$ 3.50</td></tr>
<tr><td>12/79</td><td>90</td><td>15.64</td></tr>
<tr><td>5/80</td><td>160</td><td>11.73</td></tr>
<tr><td>5/81</td><td>500</td><td>3.05</td></tr>
<tr><td>9/82</td><td>470</td><td>3.32</td></tr>
</table>
Old price is not representative of cost.</td></tr>
<tr><td>350175</td><td>Manifold Assy.</td><td>$ 273.67
1980
APL</td><td>$ 735.07
1981
APL</td><td>Old price based on 1978 P.O. for 140 pieces. New pric based on 1979 P.O. competitively awarded for 78 pieces Quote summary for 80 pieces as follows:
<table>
<tr><th></th><th>Vendor A</th><th>Vendor B</th><th>Vendor C</th></tr>
<tr><td>1978</td><td>$221.94</td><td>$398.62</td><td>$318.95</td></tr>
<tr><td>1979</td><td>$539.82</td><td>$637.80</td><td>$657.00</td></tr>
</table>
Old price is not representative of cost.</td></tr>
<tr><td>356074</td><td>Spacer</td><td>$ .44
1980
APL</td><td>$ 4.29
1981
APL</td><td>Old price based on 1978 P.O. for 3,560 pieces. New price based on 1979 expedite P.O. for 210 pieces. Vendor change occurred during 1979, original vendor experienced quality problems and late in the order period a decision to go to a second source on an expedite basis was made. Old price is not representative of cost.</td></tr>
</table>

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
529740	Boss	$ 77.28 OA 1980	$ 1,016.70 1981 APL	Old price basis cannot be ascertained. New price based on 1980 P.O. competitively awarded with machining vendor for five (5) pieces. Old price is not representative of cost.
57835681	Rivet	$ .24 1980 APL	$ 1.00 1981 APL	Old price based on 1977 P.O. awarded for 155,850 pieces escalated to 1980. Engineering change 294646 issued 5-5-78 changed the material of this rivet from steel to nickel alloy. The change was a manufacturing Class II change issued to resolve a cracking problem that occurred in assembly when the steel rivets were flared. The new price is based on a 1980 P.O. competitively awarded for 50,040 pieces of new material. Old price is not representative of cost.
429609	Lock	$ .10 1980 APL	$ 1.17 1981 APL	New price is incorrect. Price established on basis of 1980 P.O. competitively awarded for 20,000 pieces of $85.75/M. Spare parts price based on incorrect cost of $85.75/C. Spare parts price should be $.12 each. No deliveries were final priced at $1.17. Deliveries were final priced the following year at $.15 each.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
452167	Housing Assy.	$ 374.00 OA 1981	$ 2,238.76 1981 APL	Old price based on 1963 P.O. for 220 pieces escalated to 1979 by 1.2% cumulatively. New price based on 1980 P.O. competitively awarded for 13 pieces. Old price is not representative of cost.
500889	Tube Assy.	$ 103.53 OA 1980	$ 691.74 1981 APL	Old price based on 1967 P.O. nominally escalated to 1979. New price based on 1980 P.O. competitively awarded for 17 pieces. Old price is not representative of cost.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
412152	Ring	$ 9.64 1980 APL	$ 34.97 1981 APL	Old price is based on 1979 P.O. competitively awarded for 1,040 pieces. New price based on expedite P.O. issued in 1980 for 1,000 pieces. Old price is not representative of cost.
500714	Tube Assy.	$ 161.73 OA 1980	$ 493.84 1981 APL	Old price based on 1978 P.O. competitively awarded for 15 pieces. Approximately one year after award, vendor complained he had misquoted. Requirements accepted at award price. New price based on 1979 P.O. competitively awarded for 13 pieces. Prices are correct.
308862	Bracket Assy.	$ 1.00 OA 1980	$ 13.91 1981 APL	Old price is a government supplied price which P&WAG accepted subject to redetermination, we had no old price. New price based on 1980 P.O. competitively awarded for 2,200 pieces. Old price is not representative of cost.
242746	Lock	$ .28 1980 APL	$ 1.97 1981 APL	Old price based on 1979 P.O. competitively awarded for 21,500 pieces. New price is based on 1980 expedite P.O. for 680 pieces. Old price is not representative of cost.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
710772	Shroud Assy.	$4,963.00 OA 1979	$19,912.14 Repricing Mod 1981 $ 2/82	Part material is nickel based alloy. Price adjustment is attributed to four major components. Shroud, Ring (1) and Ring (2) - Old price based on 1976 P.O. (each part) for 11 pieces nominally escalated to 1979. New price based on 1980 P.O. (each part) competitively awarded for three (3) pieces. Seal - Old price based on 1976 P.O. for 12 pieces nominally escalated to 1979. New price based on 1980 P.O. competitively awarded for two (2) pieces. Old price is not representative of cost.
773316	Flange	$ 504.02 OA 1980	$ 3,105.16 Repricing Mod 1981 $ 2/82	Old price is a government supplied price which P&WAG accepted subject to redetermination, we had no old price. New price based on 1980 P.O. competitively awarded for 19 pieces. Old price is not representative of cost.
572108	Blade	$ 22.00 OA 1980	$ 125.89 Repricing Mod 1981 $ 2/82	Old price based on 1974 P.O. for 6,625 pieces nominally escalated to 1980. Part material is Titanium. New price based on 1981 P.O. competitively awarded for 1,175 pieces. Old price is not representative of cost.

ORDERS REFERRED TO IN MAJOR NELSON REPORT

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
339237	Blade Set	$ 98.00 OA 1979	$ 134.81 1981 APL	Part material is Titanium. 10/79 Order acceptance priced based on 1971 P.O. for 188 pieces nominally escalated to 1979. The 1980 APL price based on 1978 P.O. competitively awarded for 260 pieces escalated nominally to 1980. The new price is based on a 1980 P.O. competitively awarded for 5,837 pieces. The 1979 Order acceptance price is not representative of cost. Article price lists for 1980 and 1981 are correct.
339246	Blade Set	$ 130.00 OA 1979	$ 201.80 1981 APL	Part Material is Titanium. 10/79 Order acceptance price based on a 1973 P.O. for 35 pieces nominally escalated to 1979. The 1980 APL price based on a 1978 P.O. competitively awarded for 359 pieces. The 1981 APL price based on 1980 P.O. competitively awarded for 8,616 pieces. The 1979 Order acceptance price is not representative of cost. The article price lists for 1980 and 1981 are correct.
759532	Blade Set	$ 188.95 1980 APL	$ 245.63 1981 APL	Part material is nickel based alloy. Old price based on 1979 P.O. competitively awarded for 15,141 pieces. Subsequently, the P.O. was amended for price-in-effect material costs. As a result, P.O. price per blade set increased from $148.78 (basis for 1980 APL) to $173.28. New price based on a 1980 P.O. competitively awarded for 4,990 pieces. Old price is not representative of cost.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
749984	Fuel Nozzle Support Assy.	$1,994.48 1981 APL	$ 2,592.53 1982 APL	Part is shop sourced. The 1981 APL and the 1982 APL are correct and representative of cost. A major portion of the increase noted is due to a revision in quality requirements. In December 1980 a pneumatic leak test procedure was established for the part, the test procedure was incorporated in mid 1981 and the labor standards were revised accordingly. The 1982 APL reflects this revision.
705511	Disk	$1,878.30 1980 APL	$ 2,562.92 1981 APL	Part material is nickel based alloy. Old price is based on raw material procurement 1979 P.O. competitively awarded for 126 pieces and vendor value added procurement 1979 P.O. competitively awarded for 126 pieces. New price is based on raw material procurement 1979 P.O. competitively awarded for 66 pieces and vendor value added procurement 1980 P.O. competitively awarded for 62 pieces. Prices are correct and representative of costs.

PART NUMBER	NOMENCLATURE	OLD PRICE	NEW PRICE	REASON/STATUS OF INVESTIGATION
749670	Support Ejector Assy. Of	$35,189.00 OA 1979	$190,855.38 1982 APL	Price adjustment for this assembly is attributed to two major components, a bracket assembly constructed of Titanium and a support assembly constructed of Steel. Bracket Assembly - Old price is based on a 1974 P.O. for 17 pieces nominally escalated to 1979. The original vendor experienced a fire in 1978 that destroyed his capability to produce the part. The new price is based on a 1981 P.O. competitively awarded to another vendor for 20 pieces. Support Assembly - Old price is based on down part number shop sourced with cost data varying from 1974 to 1978 escalated nominally to 1979. The new price is based on 1981 P.O. competitively awarded for four (4) pieces. Old price is not representative of cost.
428920	Tube Assy.	$ 543.80 1981 APL	$ 1,528.20 1982 APL	Old price is based on a 1979 P.O. competitively awarded for 21 pieces. New price is based on a 1981 P.O. competitively awarded for 11 pieces. The problem cited with this part concerns early delivery with repricing to year of scheduled delivery. The order in question entered on Contract N00383-80-G-0101 SDBG Item 21 for 11 pieces scheduled for delivery CY 1982. The order was delivered in CY 1981. The price used for repricing was based on the cost for the requirement. Although the cost was incurred in 1981, the new price is fair and reasonable.

ATTACHMENT II

DELIVERIES OF PART AT UNREPRESENTATIVE PRICES

Final Priced Deliveries

A. Special Call Orders Cited in Hancock Letter:

Part Number	Contract Number	Call Order	Unit Price	Quantity	Total Price
282072	9102	SDU8	$ 153.29	6	$ 919.74
773316	0101	SD9H	$ 504.02	18	$ 9,072.36
572108	0101	SDR3	$ 22.00	300	$ 6,600.00
				SUB-TOTAL	$ 16,592.00

B. Additional Call Orders:

Part Number	Contract Number	Call Order	Unit Price	Quantity	Total Price
242746	7102	TAJ2	$ 0.28	21,000	$ 5,880.00
350175	7102	TA50	$ 273.67	17	$ 4,652.39
	7102	TA2S	$ 273.67	93	$ 25,451.31
494559	9102	SD79	$ 271.78	46	$ 12,501.88
510869	9102	SD29	$ 113.03	34	$ 3,843.02
516093	7102	TA2V	$1,827.32	60	$109,639.20
566819	9102	SD36	$1,842.97	3	$ 5,528.91
	9102	SD71	$1,842.97	5	$ 9,241.85
	7102	TA2Q	$1,842.97	10	$ 18,429.70

November 16, 1982

DELIVERIES OF PART AT UNREPRESENTATIVE PRICES (Continued)

B. Additional Call Orders (Continued):

Part Number	Contract Number	Call Order	Unit Price	Quantity	Total Price	
578356R1	9102	SDB3	$ 0.24	11,250	$ 2,700.00	
638010	7102	TAM2	$ 453.89	135	$ 61,275.15	
	7102	TA2V	$ 453.89	86	$ 39,034.54	
665550	9102	SDU9	$1,137.00	4	$ 4,548.00	
				SUB-TOTAL	$302,725.95	
				TOTAL		$319,317.95

November 16, 1982

DELIVERIES OF PART AT UNREPRESENTATIVE PRICES (Continued)

C. Deliveries for Which Corrected Prices Can Be Determined:

Deliveries at Incorrect Prices or at Prices Not Representative of Cost:

Part Number	Contract Number	Call Order	Unit Price	Quantity	Total Price
773316	0101	SD9H	$ 504.02	18	$ 9,072.36
572108	0101	SDR3	$ 22.00	300	$ 6,600.00
516093	7102	TA2V	$1,827.32	60	$109,639.20
566819	9102	SD36	$1,842.97	3	$ 5,528.91
	9102	SD71	$1,842.97	5	$ 9,241.85
	7102	TA2Q	$1,842.97	10	$ 18,429.70
665550	9102	SDU9	$1,137.00	4	$ 4,548.00
				SUB-TOTAL	$163,060.02

Deliveries at Prices Restated:

Part Number	Contract Number	Call Order	Unit Price	Quantity	Total Price
773316	0101	SD9H	$3,105.16	18	$ 55,892.88
572108	0101	SDR3	$ 125.89	300	$ 37,767.00
516093	7102	TA2V	$6,080.33	60	$364,819.80

DELIVERIES OF PART AT UNREPRESENTATIVE PRICES (Continued)

Deliveries at Prices Restated (Continued):

Part Number	Contract Number	Call Order	Unit Price	Quantity	Total Price
566819	9102	SD36	$6,379.50	3	$ 19,138.50
	9102	SD71	$6,379.50	5	$ 31,897.50
	7102	TA2Q	$6,379.50	10	$ 63,795.00
665550	9102	SDU9	$3,977.98	4	$ 15,911.92
				SUB-TOTAL	$589,222.60

DIFFERENCE BETWEEN INCORRECT/UNREPRESENTATIVE AND RESTATED PRICES $426,162.58

November 16, 1982

ATTACHMENT III

DEVELOPMENT OF MARK-UP FACTORS

The pricing terms of the Basic Ordering Agreement establish the requirement to negotiate material and labor mark-up factors by product line. The negotiated factors for a calendar year are then applied to the standard cost for that year to establish the redetermined prices for all parts on order and parts to be placed on order during the ordering period of the contract. Unit prices thus established are then summarized on the Article Price List. In the event that a price for a part does not appear on the Article Price List, an estimate will be used for order acceptance and intermediate repricing actions.

The proposed mark-up factors presented in this attachment are set down in two formats. The first is on a cost basis which groups variances in categories related to distribution bases. The second, the pricing basis, is a factor determination related to a standard cost of unity. Here the variance categories displayed are selected for ease of negotiation. For instance, in the material mark-up, the amounts for price variance and vendor tooling usually are at issue and are set out from the category of Other Variances for visibility.

Product Line JC representing parts peculiar to the TF30-P-414 engine is compared in Attachment IIIA on a cost versus pricing basis to demonstrate the derivation of the mark-up factors. The cost basis column is an estimate of the value of spare parts to be delivered during calendar year 1981 to that product line assignment.

Unless otherwise obvious, the following is a brief explanation of the elements of cost:

Standard Material	-	Expected purchase price of material and purchased parts. The base for measurement and distribution of material variances and vendor tooling costs.
Standard Change	-	Product Line Specific Variance due to revaluing year-end inventories to the current year standard costs.
Substitution	-	Variance occurs when actual part source is different from the standard source.
Period Cost Variance	-	Spoiled work and defective material net of recoveries from vendors.
Total Material Overhead Base	-	Base for distribution of material overhead.
Other Variances	-	Grouping of balance of material variances and vendor tooling.

Material Overhead	-	Sum of prior year absorbed overhead inventory balance and current year absorbed overhead as relieved from inventory plus current year over/under absorption.
Total Material	-	Sum of all material costs including overhead.
Standard Labor	-	Costed engineered standard time. The base for measurement and distribution of labor variances and shop tooling.
Labor Applied Variances	-	Includes inventoried labor variances and labor standard change variance.
Labor Period Cost Variances	-	Represents current year production losses due to rework and spoiled work.
Total Labor	-	Base for distribution of manufacturing overhead.
Manufacturing Overhead	-	Sum of prior year absorbed overhead inventory balance and current year absorbed overhead as relieved from inventory plus current year absorption on period cost variances plus current year over/under absorption.
Shop Tooling	-	Inventoried cost of the design and fabrication of F&WA shop tooling relieved on the basis of standard labor and related as a percent to total labor.
Inventory Adjustment	-	Net current year write-off due to physical inventory and transfers to and from Dormant Stores.
Specific Administration	-	Consists of administrative expenses applicable only to Government business and are not classified as G&A.
G&A Overhead	-	Manufacturing Division G&A expenses.
Cost of Money	-	Manufacturing Division facilities capital cost of money.
EAPS	-	Engineering assistance to production and service costs.

General Overhead - Government Products Division General Overhead expenses.

Cost of Money - Government Products Division facilities capital cost of money.

ATTACHMENT IIIA

PRODUCT LINE JG TF30-P-414 PECULIAR

	COST BASIS
Standard Material	$ 8,837,450
Standard Change	-200,281
Substitution	- 30,379
Percent	-0.34%
Period Cost Variance	109,557
Percent	1.24%
Total Material Overhead Base	$ 8,716,347
Other Variances	624,716
Percent	7.07%
Material Overhead	499,939
Percent	5.74%
Total Material	9,841,002
Standard Labor	338,390
Labor Applied Variance	453,026
Percent	133.91%
Labor Period Cost Variance	101,589
Percent	30.03%
Total Labor	892,915
Manufacturing Overhead	3,882,777
Percent	434.84%
Shop Tooling	299,417
Percent	33.53%
Sub-Total	14,916,111
Inventory Adjustment	100,124
Percent	0.67%
Total Production Cost	15,016,235
Specific Administrative	57,062
Cost of Sales	15,073,297
G&A Overhead	425,067
Percent	2.82%
Total Mfg. Cost Less COM.	15,498,364
Cost of Money	200,368
Total Mfg. Division Cost	15,698,732

	PRICING BASIS Material	PRICING BASIS LABOR
Standard Material	1.000000	
Standard Change	-.022663	
Substitution	-.003438	
Spoiled & Defective	.012397	
Material Overhead Base	.986296	
Vendor Tooling	.036960	
Price Var	.031663	
Other Variance (Balance)	.002066	
Total Material Overhead	.056571	
Total Material	1.113556	
Standard Labor		1.000000
Applied Labor Variance		1.339123
Period Cost Labor Variance		.300293
Total Labor		2.639418
Manufacturing Overhead		11.477319
Shop Tooling		.885064
Sub-Total	1.113556	15.001801
Inventory Adjustment !	.007474	.100692
Total Production Cost	1.121030	15.102493
Specific Administrative	.004260	.057389
Cost of Sales	1.125290	15.159882
G&A Overhead	.031733	.427509
Mfg. Cost (Less COM)	1.157023	15.587391
Cost of Money	.001841	.544194
Total Mfg. Division Cost	1.158864	16.131585

write off to Government [illegible]

PRODUCT LINE JG TF30-P-414A PECULIAR (Continued)

	COST BASIS
Total Mfg. Division Cost	$ 15,698,732
EAPS Percent	1.6288%
EAPS Dollars	255,701
Sub-Total	15,954,433
Warranty Percent	.2000%
Warranty Dollars	31,909
Sub-Total	15,986,342
Gov't. Overhead Percent	9.9400%
Gov't. Overhead Dollars	1,589,042
Sub-Total	17,575,384
Cost of Money	28,462
Total Cost	17,603,846
Profit Percent	15.0000%
Profit Dollars	2,636,308
Total Price Mark-Up	20,240,153

	PRICING BASIS	
	Material	Labor
Total Mfg. Division Cost	1.158864	16.131585
EAPS Percent	1.6288%	1.6288%
EAPS Mark-Up	.018876	.262751
Sub-Total	1.177740	16.394336
Warranty Percent	.2000%	.2000%
Warranty Mark-Up	.002355	.032789
Sub-Total	1.180095	16.427125
Gov't. Overhead Percent	9.9400	9.9400
Gov't. Overhead Mark-Up	.117301	1.632856
Sub-Total	1.297396	18.059981
Cost of Money Mark-Up	.002101	.029240
Total Cost Mark-Up	1.299497	10.089221
Profit Percent	15.0000%	15.0000%
Profit Mark-Up	1.94609	2.708997
Total Price Mark-Up	1.494106	20.798218

ATTACHMENT IIIB

DEVELOPMENT OF MARK-UP FACTORS

1981

FINAL NEGOTIATED SPARE PARTS MARK-UP FACTORS

	Engine Model	Domestic Material	Domestic Labor
CN	JT3, GG3 Peculiar	1.222502	14.609303
FN	JT8 Peculiar	1.214925	12.064044
GN	JT9 Peculiar	1.253399	13.730704
HM	Common J52	1.349390	23.469024
JG	TF30-P-414 Peculiar	1.379805	18.019116
MM	Common Military In-Production	1.319053	17.292601
SL	TF33-PW-100 Peculiar	1.298701	27.625491
SM	Out of Production Military	1.492505	28.801769
XX	In-Production Commercial	1.254971	12.591963
YY	In-Production Military & Commercial	1.361702	15.959836

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PRATT & WHITNEY AIRCRAFT GROUP
GOVERNMENT PRODUCTS DIVISION
PROPOSAL FOR NAVAIR ENGINES AND SPARE PARTS
CONTRACT N00019-80-C-0002
CALENDAR YEARS 1981 AND 1982

PROPOSED SPARES MARKUP SUMMARY 1981

Product Line	Domestic Markup	
	Material	Labor
CN	1.441921	18.019221
FN	1.396898	14.878882
GN	1.438651	17.973903
HM	1.479463	25.806122
JG	1.494106	20.798218
MM	1.424266	19.614599
SL	1.458517	36.385041
SM	1.637843	20.619397
XX	1.440456	15.531017
YY	1.421798	17.223622

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CONTRACT N00019-80-C-[illegible]
CALENDAR YEAR 1981

1981 DETAILED SPARE PARTS MARK-UP

	[illegible]		[illegible]		[illegible]		[illegible]	
	MATERIAL	LABOR	MATERIAL	LABOR	MATERIAL	LABOR	MATERIAL	LABOR
STANDARD MATERIAL	1.000000		1.000000		1.000000		1.000000	
STANDARD CHANGE	[illegible]		[illegible]		[illegible]		[illegible]	
SUBSTITUTION	[illegible]		[illegible]		[illegible]		[illegible]	
SPOILED & DEFECTIVE	[illegible]		[illegible]		[illegible]		[illegible]	
MAT. MFG. BASE	[illegible]		[illegible]		[illegible]		[illegible]	
VENDOR TOOLING	[illegible]		[illegible]		[illegible]		[illegible]	
PRICE	[illegible]		[illegible]		[illegible]		[illegible]	
OTHER VARIANCES	[illegible]		[illegible]		[illegible]		[illegible]	
TOTAL MAT VAR	[illegible]		[illegible]		[illegible]		[illegible]	
TOTAL MATERIAL	[illegible]		[illegible]		[illegible]		[illegible]	
STANDARD LABOR		1.000000		1.000000		1.000000		1.000000
APPL LABOR VARS		[illegible]		[illegible]		[illegible]		[illegible]
[illegible]		[illegible]		[illegible]		[illegible]		[illegible]
TOTAL LABOR		[illegible]		[illegible]		[illegible]		[illegible]
MANUFACTURING OHD		[illegible]		[illegible]		[illegible]		[illegible]
SHOP TOOLING		[illegible]		[illegible]		[illegible]		[illegible]
MFG TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
INVENTORY ADJUST	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL PRODUCT COST	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SPECIFIC ADMIN.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
COST OF SALES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
G & A OVERHEAD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MFG COST [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
COST OF MONEY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL MFG [illegible] COST	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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UPDATED PROPOSAL FOR NAVAIR ENGINES AND SPARE PARTS
CONTRACT [illegible]
CALENDAR YEAR 1981

1981 DETAILED SPARE PARTS MARK-UP

	[illegible]		[illegible]		[illegible]	
	MATERIAL	LABOR	MATERIAL	LABOR	MATERIAL	LABOR
STANDARD MATERIAL	1.000000		1.000000		1.000000	
STANDARD CHANGE	-.007310		-.004987		-.101103	
SUBSTITUTION	-.003001		.013017		-.000504	
SPOILED & DEFECTIVE	.010000		.030100		.019178	
MAT. ENG. BASE	[illegible]		.050014		.077000	
VENDOR TOOLING	.099730		.005030		.007190	
PRICE	.033002		.000290		.000790	
OTHER VARIANCES	.060205		-.010113		.020700	
TOTAL MAT ENG	.079103		.050077		.009050	
TOTAL MATERIAL	1.170000		1.030300		1.009050	
STANDARD LABOR		1.000000		1.000000		1.000000
OPPL LABOR VARS		1.263051		.900730		.040000
PER COST LAB VARS		.997790		.199910		.061070
TOTAL LABOR		3.260000		1.730000		2.050000
MANUFACTURING ENG		11.901710		7.060637		0.200000
SHOP TOOLING		.969750		1.700040		.992013
MFG TOTAL	1.170200	16.360276	1.030300	10.000070	1.009530	12.290009
INVENTORY ADJUSTS	.000071	.000000	.000001	.075313	.020100	.000000
TOTAL PRODUCTION COST	1.230300	15.050293	1.000001	11.031303	1.073200	12.990071
SPECIFIC CONTRA.	.000600	.057010	.000100	.009010	.000070	.007000
COST OF SALES	1.201097	15.113067	1.100001	11.070122	1.077200	12.627007
G & A OVERHEAD	.030000	.020200	.031135	.320018	.030300	.790100
MFG COST (LESS COM)	1.270079	15.139067	1.130216	11.001900	1.107670	12.009061
COST OF MONEY	.001000	.500520	.001702	.997901	.001673	.050001
TOTAL MFG DIV COST	1.277010	16.000101	1.130070	12.700111	1.109001	13.050000

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CONTRACT [illegible]
CALENDAR YEAR 1981

PROPOSED SPARE PARTS COST

	J52 COMMON	TF30-P414 PECULIAR	MILITARY	TF33-P100 PECULIAR	OUT PROD MILITARY	MILITARY & COMMERCIAL	TOTAL SPARES
STANDARD MATERIAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
STANDARD CHANGE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SUBSTITUTION	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERIOD COST VARIANCE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL MATL [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OTHER VARIANCES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MATERIAL OVERHEAD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL MATERIAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
STANDARD LABOR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LABOR APPLD VAR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LABOR PER COST VAR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL LABOR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MANUFACTURING OVERHEAD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SHOP TOOLING	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SUB-TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
INVENTORY ADJUSTMENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL PRODUCTION COST	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SPECIFIC COSTS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
COST OF SALES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
G & A OVERHEAD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PERCENT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOT MFG CST LESS COM	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
COST OF MONEY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL MFG PRC COST	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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PROPOSAL FOR NAVAIR ENGINES AND SPARE PARTS
CONTRACT N00019-80-C-0003
CALENDAR YEARS 1981 AND 1982

DOMESTIC SPARES MARKUP

YEAR - 1981	PL-CM		PL-FM		PL-SM		PL-[illegible]	
	MATERIAL	LABOR	MATERIAL	LABOR	MATERIAL	LABOR	MATERIAL	LABOR
MFG. COST MARKUP	1.130154	14.223152	1.102616	11.745171	1.135573	14.107301	1.137520	19.841646
EAPS PERCENT							1.7050	1.7050
EAPS MARKUP							.019395	.338300
SUBTOTAL	1.130154	14.223152	1.102616	11.745171	1.135573	14.107301	1.156915	20.179946
WARRANTY PERCENT	.1000	.1000	.1000	.1000	.1000	.1000	1.0000	1.0000
WARRANTY MARKUP	.001130	.014223	.001103	.011745	.001136	.014107	.011569	.201799
SUBTOTAL	1.139292	14.237375	1.103719	11.756916	1.136709	14,201568	1.168484	20.381745
GEN OVHD PCT	9.9400	9.9400	9.9400	9.9400	9.9400	9.9400	9.9400	9.9400
GEN OVHD MARKUP	.113246	1.415195	.109710	1.168637	.112989	1.411636	.116147	2.025945
G/O NON-DOD END PCT								
G/O NON-DOD END MARK								
SUBTOTAL	1.252538	15.652570	1.213429	12.925553	1.249698	15.613204	1.284631	22.407690
COST OF MONEY MARKUP	.001502	.018765	.001435	.015496	.001498	.018718	.002137	.037270
TOTAL COST MARKUP	1.254040	15.671335	1.214864	12.941049	1.251196	15.631922	1.286768	22.444960
PROFIT PERCENT	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
PROFIT MARKUP	.187881	2.347886	.182014	1.938833	.187455	2.341981	.192695	3.361154
TOTAL PRICE MARKUP	1.441921	18.019221	1.396890	14.879882	1.438651	17.973903	1.479463	25.806122

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CONTRACT N00019-80-C-0083
CALENDAR YEARS 1981 AND 1982
DOMESTIC SPARES MARKUP (Continued)

YEAR - 1981	PL-J8		PL-HPL		PL-SL		PL-SRL	
	MATERIAL	LABOR	MATERIAL	LABOR	MATERIAL	LABOR	MATERIAL	LABOR
MFG. COST MARKUP	1.158864	16.131585	1.104695	15.213542	1.117494	27.877672	1.277919	16.088191
EAPS PERCENT	1.6200	1.6200	1.6200	1.6200	2.1035	2.1035	1.1646	1.1646
EAPS MARKUP	.018876	.262751	.017943	.247798	.023506	.586407	.014883	.187363
SUBTOTAL	1.177740	16.394336	1.122638	15.461340	1.141000	28.464079	1.292802	16.275554
WARRANTY PERCENT	.2000	.2000	.2000	.2000	1.0000	1.0000	.1000	.1000
WARRANTY MARKUP	.002355	.032789	.002245	.030923	.011410	.284641	.001293	.016276
SUBTOTAL	1.180095	16.427125	1.124933	15.492263	1.152410	28.748720	1.294095	16.291830
GEN OVHD PCT	9.9400	9.9400	9.9400	9.9400	9.9400	9.9400	9.9400	9.9400
GEN OVHD MARKUP	.117301	1.632856	.111818	1.539931	.114550	2.857623	.128633	1.619408
G/A NON-GOV IND PCT								
G/A NON-GOV IND MARK								
SUBTOTAL	1.297396	18.059981	1.236751	17.032194	1.266960	31.606343	1.422728	17.911238
COST OF MONEY MARKUP	.002101	.029240	.002002	.027576	.001513	.037747	.001706	.021473
TOTAL COST MARKUP	1.299497	18.089221	1.238753	17.059770	1.268473	31.644090	1.424434	17.932711
PROFIT PERCENT	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
PROFIT MARKUP	.194689	2.708997	.185513	2.554829	.190044	4.740951	.213409	2.686686
TOTAL PRICE MARKUP	1.494186	20.798218	1.424266	19.614599	1.458517	36.385041	1.637843	20.619397

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GOVERNMENT PRODUCTS DIVISION
PROPOSAL FOR NAVAIR ENGINES AND SPARE PARTS
CONTRACT N00019-80-C-0003
CALENDAR YEARS 1981 AND 1982
DOMESTIC SPARES MARKUP (Continued)

YEAR - 1981	PL-XX		PL-YY	
	MATERIAL	LABOR	MATERIAL	LABOR
MFG. COST MARKUP	1.136998	12.259133	1.109351	13.438654
EAPS PERCENT			1.1646	1.1646
EAPS MARKUP			.012920	.156507
SUBTOTAL	1.136998	12.259133	1.122271	13.595161
WARRANTY PERCENT	.1000	.1000	.1000	.1000
WARRANTY MARKUP	.001137	.012259	.001122	.013595
SUBTOTAL	1.138135	12.271392	1.123393	13.608756
GEN OVHD PCT	9.9400	9.9400	9.9400	9.9400
GEN OVHD MARKUP	.113131	1.219776	.111665	1.352710
G/O NON-DOD END PCT				
G/O NON-DOD END MARK				
SUBTOTAL	1.251266	13.491168	1.235058	14.961466
COST OF MONEY MARKUP	.001500	.016174	.001481	.017936
TOTAL COST MARKUP	1.252766	13.507342	1.236539	14.979402
PROFIT PERCENT	15.0000	15.0000	15.0000	15.0000
PROFIT MARKUP	.187690	2.023675	.185259	2.244220
TOTAL PRICE MARKUP	1.440456	15.531017	1.421798	17.223622

USE OR DISCLOSURE OF INFORMATION IS SUBJECT TO THE RESTRICTION ON THE TITLE PAGE OF THIS PROPOSAL

UNITED TECHNOLOGIES CORPORATION
PRATT & WHITNEY AIRCRAFT GROUP
GOVERNMENT PRODUCTS DIVISION
PROPOSAL FOR NAVAIR ENGINES AND SPARE PARTS
CONTRACT N00019-80-C-0003
CALENDAR YEARS 1981 AND 1982

ESTIMATED SPARES FOR YEAR 1981

PROJ - 419
ITEM - 020
YEAR - 1981

	10 J52 P/L MM	20 TF30-P414 P/L J8	30 TF30 P/L MM	40 TF33-P100 P/L SL	50 O.O.P. P/L SM	60 MILSCOMCL P/L YY	TOTAL
QUANTITY							
MD TRANSFER	21,093,582	15,698,732	30,954,119	4,292,332	70,280,812	70,253,751	212,573,328
VALUE ADDED							
SUBTOTAL	21,093,582	15,698,732	30,954,119	4,292,332	70,280,812	70,253,751	212,573,328
EAPS PERCENT	1.7050	1.6200	1.6200	2.1035	1.1646	1.1646	1.3391
EAPS DOLLARS	359,646	255,701	504,181	90,289	818,490	818,175	2,846,482
CPD TRANSFER							
GPD LCM							
SUBTOTAL	21,453,228	15,954,433	31,458,300	4,382,621	71,099,302	71,071,926	215,419,810
WARRANTY PERCENT	1.0000	.2000	.2000	1.0000	.1000	.1000	.2299
WARRANTY DOLLARS	214,532	31,909	62,917	43,826	71,099	71,072	495,355
CC:IS. OFFICE COST							
RENTAL OF GOV. FAC.							
SUBTOTAL	21,667,760	15,986,342	31,521,216	4,426,447	71,170,402	71,142,998	215,915,165
GEN OVHD PERCENT	9.9400	9.9400	9.9400	9.9400	9.9400	9.9400	9.9400
GEN OVHD DOLLARS	2,153,775	1,589,042	3,133,209	439,989	7,074,338	7,071,614	21,461,967
G/O NON-DOD END PCT							
G/O NON-DOD END DOL							
SUBTOTAL	23,821,535	17,575,384	34,654,425	4,866,436	78,244,740	78,214,612	237,377,133
COST OF MONEY	39,626	28,462	56,119	5,810	93,786	93,750	317,552
TOTAL COST	23,861,161	17,603,846	34,710,544	4,872,246	78,338,525	78,308,362	237,694,685
PROFIT PERCENT	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
PROFIT DOLLARS	3,573,230	2,636,308	5,198,164	729,965	11,736,711	11,732,192	35,606,570
TOTAL PRICE	27,434,391	20,240,153	39,908,708	5,602,212	90,075,236	90,040,554	273,301,255

ATTACHMENT IIIC

PRICING EXAMPLE

Part Number: 737122

Year: 1981

	Product Line	Material	Labor
Standard Cost:	SM	$2,499.804	-
	MM	$ 17.940	$ 8.709
	YY	$ 8.002	$3.263
Negotiated Mark-Up Factor:	SM	1.492505	-
	MM	1.319053	17.292601
	YY	1.361702	18.801769
Unit Price:*	SM	$3,730.970	-
	MM	$ 23.664	$ 150.601
	YY	$ 10.896	$ 61.350
	TOTAL	$3,977.48	

*Standard Cost x Negotiated Mark-Up Factor.

DEC.01 '82 15:40 GMT PWA 305 840-2495 NEW TT ROOM

ATTACHMENT 9

UNITED
TECHNOLOGIES
PRATT&WHITNEY
AIRCRAFT

P.O. Box 2691
West Palm Beach Florida 33402
305/840-2000

Government Products Division

In reply please refer to:
RJJ:JSA:cbe:Contract Management 0083T

22 November 1982

Department of the Navy
Aviation Supply Office
700 Robbins Avenue
Philadelphia, Pa. 19111

Attention: R. Sieger/PGM-1

Subject: ASO BOA Price Determination Clause Modification Proposal

Reference: (1) ASO Request for Modification of the ASO BOA Price Determination Clause, 12 Nov. 82
(2) ASO/PWA Meeting at ASO, 12 Nov. 82

Gentlemen:

Per your Reference (1) request and our Reference (2) discussion, we are pleased to submit herewith our proposed changes to BOAs N00383-81-G-1107, N00383-80-G-0101, N00383-79-G-9102, and N00383-78-7102 Clause 104 (a) beginning with the third sentence:

> "The price to be paid for a spare part delivered under an order placed under this BOA shall be the price determined to be applicable to such part in the redetermination period [paragraph (b) next below] during which such part is contractually scheduled for delivery or in the redetermination period during which such part is actually delivered, whichever is earlier. However, the price to be paid for a spare part delivered under an order placed under this BOA shall not change by reason of the actual delivery of such part being made from the redetermination period in which the part is contractually scheduled for delivery, if the Government requests that delivery be earlier than contractually required."

It should be noted that this change will apply to the open order balance and all orders received on or after January 1, 1983. The 1983 price determination will be administered in accordance with the terms and conditions presently stated in the BOA. In consideration for the above change, P&WA requests that the ASO ensure that P&WA receives top priority for all payments due for orders placed under the BOAs.

Very truly yours,

UNITED TECHNOLOGIES CORPORATION
Pratt & Whitney Aircraft
Government Products Division

J. S. Austin
Contract Management

RECEIVED Roberta A King
20 Dec 84 - 3:45 PM

MEMORANDUM FOR SAF/FM (MR. CARVER)

20 December 1984

SUBJECT: Trip Report

1. Organization Visited

Boeing Military Airplane Co., Det 34
Wichita, Kansas

Dates

18-19 December 1984

2. Travelers

Mr. A. E. Fitzgerald, Management Systems Deputy
Mr. Kris Kolesnik, Senate Investigator

3. Key Personnel Contacted

Colonel Joe Martin, AFPR, Boeing-Wichita
Ompal Chauhan
Maj Jerry Talbot
Jim Reynolds
Al Cappola
Dave Hoolihan
Wilma J. Compton
Capt Tony Barth
And others

4. Purpose

Cost reduction.

5. Objectives

Reduce costs.

6. Results of Visit

No hard cost reductions to report as a result of visit.

7. Other Remarks

Mr. Kolesnik stated that his orders from Senator Grassley were (1) to check on the welfare of Ompal Chauhan to make sure that he was not being retaliated against because of his Congressional testimony, and (2) to see what the Air Force was doing to save the taxpayers' money.

Mr. Kolesnik asked that Mr. Chauhan join the group meeting and also distributed a copy of a letter from Senator Grassley to Secretary Orr (Tab 1).

With respect to checking on what the Air Force was doing to save money, and also to educate himself on our cost control in general, Mr. Kolesnik focused on several major points. First, he distributed copies of the papers included as Tab 2. Mr. Kolesnik had been handed the Tab 2 material by an AFSC Legislative Liaison representative at the Andrews Terminal just before we left. Mr. Kolesnik discussed this material with me during our trip from Andrews. I noted especially that Senator Grassley had requested the material via a letter dated 14 December (Friday) of last week and had received in on the morning of the 18th (Tuesday). Please note that in this short time, Seantor Grassley was provided with equivalent unit data for B-1 production for four major contractors. Contrast this with the "dumb insolence" we have received from the military staff and commands for the more than 2½ years during which we have been trying to obtain similar information on much simpler systems. Also, apparently in connection with the Senator's 14 Dec letter to Secretary Orr, I received on my return from Wichita a letter from Mr. Parfitt (Tab 3) containing allegations by Colonel Pinckney that a letter from Senator Grassley to Secretary Orr "could only have been written by Ernie Fitzgerald". From Mr. Parfitt's description it appears to be the letter reproduced as page 9 of Tab 2 (Colonel Pinckney confirms that the letter he was referring to was that letter). The allegations in Tab 3 are absolutely false.

Mr. Kolesnik explained to the AFPRO people what he wanted to complete the response to Senator Grassley's 14 December letter. AFPRO personnel were still compiling requested documents when I left.

Mr. Kolesnik also asked to look at the C-22 which was being refurbished for the Commander of the Southern Command at Boeing-Wichita. We looked at the airplane and walked through its interior on our lunch break.

Mr. Kolesnik requested information on the B-52 circuit cards which we had discussed during a visit this summer to Warner-Robins. He was given additional information on this subject.

Mr. Kolesnik gave the AFPRO personnel an explanation of why Senator Grassley was so intensely interested in cost reduction at this time. He said that, in his opinion, Congress was going to be forced to restrict future growth of the military budget in order to bring the deficit under control. He presented a series of charts demonstrating how past optimistic deficit projections had been misleading. He said that proponents of continuing large geometric increases in the military budget tried to paint a picture for Congress and the public offering only two alternatives: (1) Grant the requested increases, or (2) suffer a decline in military capability. Mr. Kolesnik said that Senator Grassley and his staff were convinced that the third alternative of saving money through cost reduction would permit a start on controlling the deficit by restraining DOD budget growth while, at the same time, preserving defense capability. Mr. Kolesnik said that the Senator had sought and would continue to seek facts from DOD personnel which might help to show how we could restrain budget growth without cutting military substance. He said that factual information from field people was absolutely vital in this regard (Mr. Kolesnik later said that Mr. Chauhan would be called to testify in upcoming budget committee hearings and that I might also be called upon).

I asked for information on three subjects related to cost reduction and control:

1. Subcontract information. I asked for cost and pricing data and ongoing cost control data which was submitted to BMAC by their subcontractors and also for data which was submitted by BMAC for the use of their prime contractors when BMAC was acting as a subcontractor itself. I received some of the information I requested and was told that the rest would be given to Mr. Kolesnik to bring back to me so as to avoid the torturous months-long "through channels" process.

2. I requested information to clarify what my office had been given in response to our requests for spare parts pricing information in connection with Senator Proxmire's request of last winter which Mr. Parfitt and I testified in October. We were told by the AFPRO person who had worked on the project, Ms. Wilma Compton, that her instructions from the Air Staff on this matter were to follow the formula pricing description contained in the Armed Serivices Procurement Manual No. 1 which calls for use of "labor hours required" as the basis for the labor estimate. Ms. Compton said that during conversations with the Air Staff, she was told to use this interpretation (that is, projected actual hours) instead of the standard times we had requested. If the numbers we were given and subsequently presented to Senator Proxmire were indeed developed on this basis, the figures we testified to were low by a factor equal to the ratio of actual to standard hours. In an effort to double-check this matter, before I left Wichita I called Mr. Parfitt and asked that he determine exactly what instructions,

heretofore unknown to us, had been given out by the Air Staff on this matter. Mr. Parfitt's memo on the responses we have received on this request so far are contained in Tab 4. Mr. Parfitt reports that you requested that I put this request in writing in order to get information I need to do my job. I hereby do so. I suggest we clear this up right away and if we have given the Joint Economic Committee incorrect information, that we collect the correct information immediately and inform Senator Proxmire of our new findings. I have asked Mr. Parfitt, who did most of the work in our office compiling these figures, to follow up on this matter. I would greatly appreciate assistance in obtaining the needed information. We may have an opportunity to pinpoint the individuals who are subverting our stewardship efforts.

3. I asked about tailoring of MIL-STD 1567, Work Measurement. I had noted in the material shown to me by Mr. Kolesnik that one of the changes to a B-1 contract was for the purpose of tailoring MIL-STD 1567. I was given a document which showed that "tailoring" included substitution of Boeing's own work measurement system description for the MIL-STD and total exclusion of time standards coverage for important segments of the work. I will continue to follow-up on this matter. However, it is clear that we have here another example of the need to allow me to exercise authority in this area.

****

When your direction to complete this report within 24 hours was relayed to me, I was told that it was for the purpose of informing Secretary Orr. I am therefore including an extra copy for his use.

A E Fitzgerald

A. E. FITZGERALD
Management Systems Deputy

United States Senate
COMMITTEE ON THE JUDICIARY
WASHINGTON, D.C. 20510

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DEBORAH G. BERNSTEIN, CHIEF CLERK
MARK H. GITENSTEIN, MINORITY CHIEF COUNSEL

TAB 1

SUBCOMMITTEE ON ADMINISTRATIVE PRACTICE
AND PROCEDURE

CHARLES E. GRASSLEY, IOWA, CHAIRMAN

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ARLEN SPECTER, PA.

HOWELL HEFLIN, ALA.
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LYNDA L. NERSESIAN, CHIEF COUNSEL AND STAFF DIRECTOR
ALICE R. [illegible], GENERAL COUNSEL

December 13, 1984

The Honorable Verne Orr
Secretary
Department of the Air Force
The Pentagon
Washington, D.C. 20330

Dear Verne:

Thank you for the response to my letter of September 19, 1984, regarding Mr. Norman Jones, Captain Robert Greenstreet, and Airman First Class Thomas Jonsson, all witnesses before the Subcommittee on Administrative Practice. I am pleased to be informed of the positive action which has resulted from their commendable efforts to reduce costs.

I am also interested in the well-being of Mr. Ompal Chauhan who testified before this subcommittee last June and is currently Chief of the Manufacturing Operations Assessment Branch, Air Force Contract Management Division, Wichita, Kansas. Mr. Chauhan has produced valuable cost efficiency information and I trust the Air Force is utilizing his expertise in this area to its fullest.

As with all witnesses before this subcommittee, I take a personal interest in the long-term result of their testimony and therefore appreciate your willingness to keep me informed.

Sincerely,

Chuck Grassley
Charles E. Grassley
Chairman, Subcommittee
on Administrative Practice
and Proceudure

CEG:lh

84. 12/18 15:15 P02 *HQ AFSC/IG AVN 858-3231 TAB 2

2 of 8

Equivalent unit data for B-1B production is as follows:

Contractor	Equivalent Unit as of 31 Oct (Airframes/LRU Shipsets/Engines)
RI	10.9
BMAC	8.9
AIL	7.464
GE	26.86

84. 12/18 15:15 P03 *HQ AFSC/IG AVN 858-3231

3 of 8

FEBRUARY - DECEMBER 1984

CONTRACT #	MOD #	$ AMOUNT	DESCRIPTION
81-C-0212 BMAC FSD	P00045	$ 1,789,538	Incorporation of Radio Frequency Signal Management System to Control Radio Frequency interface between the AIL Corporation ALQ-161 and Boeing Company Offensive Avionics
	P00053	14,818,304	Incorporation of the integration an test of Boeing Common Strategic Rotary Launcher into B-1B Offensive Avionics.
	P00074	503,000	Procurement of technical data from the Radar Altimeter to support preparation of Hazard Analysis
	A00027	162,540-	Definitization of P00074 (Net pric $340,460)
	A00013	1,279,786	Additional acquisition for developm of Nuclear Station Logic Units
	A00016	3,327	Work request repair of the General Radio Test Station
	A00017	4,022	Work request for fault isolation of the General Radio Test Station
	A00006	14,266	Work request to retrofit the Air Force Flight Test Recorder
	P00092	700,000	Incorporation of above ground level checks during blind letdown and verification of radar altimeter operation
	P00093	307,069	Revision of Avionics flight softwar to correct interface incompatibilit with aircraft systems
	A00029	87,377-	Definitization of P00093 (net price $219,692)
	P00106	975,000	Incorporation of a Special Study to enhance Terrain Following Capabilit
	P00112	270,413	Incorporation of a Special Study to determine effectiveness of adding advanced monopulse techniques to th aircraft radar system.

7.& Y

CONTRACT #	MOD #	$ AMOUNT	DESCRIPTION
81-C-0212 (Con't)	P00113	$ 450,000	Provide support to Rockwell International for Radar Cross Soction improvements.
	A00023	19,854-	Incorporation of a value engineering change for maintainability demonstrat:
	A00024	268,075	Provide for acquisition of one Air Launch Cruise Missile Simulator
	TOTAL	$26,113,029	
81-C-0213	P00034	$267,563,762	Lot III Acquisition
BMAC	P00054	35,821,890	Exercise of Non-Recurring Options
PROD	P00076	1,959,900	Extension of Acquisition of Phase I Intermediate Automatic Test Equipment (Phase IIIA)
	P00082	53,225,000	Acquisition of Test Package Sets required to support Intermediate Automatic Test Equipment
	P00083	5,000,000	Provide for expansion of memory of the dual-architectured Computer-Control Avionics
	P00084	25,207,884	Provide for acquisition of Intermediat Automatic Test Equipment (Phase IIIB)
	P00089	4,065,863-	Provide for delction of the Avionics Fixed Length Reliability Test
	P00098	13,210,412	Provides the capability to preform weapon preload by use of a Preload Tester and Aircraft Computer Program
	P00101	34,213,777	Acquisition of Test Package Sets required to support Intermediate Level Automatic Test Equipment for testing Avionics Line Replaceable Units
	P00113	2,972,815	Support of Brunswick Forward Radome Testing

CONTRACT #	MOD #	$ AMOUNT	DESCRIPTION
81-C-0213 (Con't)	A00006	$ 484,513	Acquisition of Test Analyze and Fix Environment System
	A00001	651,170-	Tailoring of MIL-STD-1567 ✓
	A00008	274,061	Support to Rockwell International for development of Avionics and Armament Maintenance Trainer
	TOTAL	$435,146,981	
81-C-0214 AIL FSD	P00034	$ 11,679-	Provides for a redesign of the 1122 Antenna
	P00035	140,200	Incorporation of the Avionics Control Unit Deficiency Program
	TOTAL	$128,521	
81-C-0215 AIL PROD	P00049	$ 560,520	Provides for a redesign of the 1122 Antenna
	P00050	19,800,000	Incorporation of the Intermediate Level Automated Test Equipment, Phase III
	P00053	1,445,513	Definitization of P00040, Incorporation of the Intermediate Level Automated Test Equipment, Phase III Transition
	P00055	66,698	Incoporation of the Avionics Contro Unit Deficiency Correction Programs
	P00059	1,224,000	Incoporation of the Technology Modernization Program Management
	P00060	82,100,000	Incorporation of Test Program Sets
	TOTAL	$105,396,731	

C.F.Y

CONTRACT #	MOD #	$ AMOUNT	DESCRIPTION
81-C-2006	P00035	$1,050,000	CCP-021; CFE Tech Manuals (Def)
FSD	P00043	410,000	CCP-024; Nat'l Gas for Alt. Cell
	P00045	1,961,800	CCP-026; Depot Test Cell (C/O)
		$3,421,800	
81-C-0222	P00022	$ 8,675,000	CCP-010R4; O & I Multi Qty SE
Lot I+II	P00010	112,200	CCP-003; CEMS
	P00027	9,583,000	Lot II Warranty
	P00017	522,005	CCP-012; Flight Test Spares
		$18,892,205	
81-C-2047	Basic	$1,580,120,000	
Lot III-V MY	P00003	12,327,000	Lot IV Warranty
		$1,592,447,000	
TOTAL FEB-DEC 1984		$1,614,761,005	

ROCKWELL INTERNATIONAL

2 of 4

FEBRUARY - DECEMBER 1984

CONTRACT #	MOD #	$ AMOUNT	DESCRIPTION
81-C-0208 B1-FSD	A00025	$ 1,325,000	Definitised Change Order P00098 which added requirement for design, fab and test 13 Dummy SRAM Missiles.
	A00029	378,605	Definitised Change Order P00125 which added Retractable Missile Cover Container.
	A00031	-376,260	CCP 130A - Credit Proposal - Credit effort to delete aircraft configuration item specifications.
	A00033	-1,217,794	Definitized P00078 which added Force Managem Alternate Inflight Recorder.
	A00035	226,288	ECP 2018A - Definitized P00124 which adds Durability and Damage Tolerance Design Chang Phase II.
	A00036	712,137	Upgraded AN/ALQ 161 Tail Warning Function. (Definitizes Change Order P00069).
	A00040	998,400	Definitised Change Order P00141 which added a requirement to study incorporation of Low Frequency/Very Low Frequency Provision on Aircraft.
	A00041	1,030,487	Definitised P00136, ECP 2399A which redesign the LOA/INS Casting.
	A00042	178,398	Definitised P00142, ECP 2298A adding Ground Cockpit Communication.
	P00122	241,348	Added changes to incorporate needed Durability and Damage Tolerance Requirements.
	P00148	13,349,119	Definitised P00114 and P00153 adding requirement for Common Strategic Rotary Launcher Integration.
	P00150	4,446,000	Definitised P00132 (CCP 146), P00136 (CCP 13 and P00134. Added study to add treatment to Radomes and Engine Inlet. Added impact for General Electric - Engine Change. Added Coating Development Study.
	P00152	7,845,347	Installation of the Stall Inhibitor System (Definitizes P00094).
	P00158	188,500	Incorporation of CCP 180A. Added B-1B Test Illumination for Night Aerial Refueling.
	P00174	2,514,000	Definitizes Change Order P00139 which added Flight and Ground Demonstration Test for Aircraft No. 9.

ROCKWELL INTERNATIONAL Page 3 of 4

FEBRUARY - DECEMBER 1984

CONTRACT #	MOD #	$ AMOUNT	DESCRIPTION
81-C-0210	A00021	$ 295,000	Definitized P0087, ECP 1512R. Deleted Band 7 1122 Antennas.
RI - PROD	A00022	1,795,000	Added "Force Management Alternate Inflight Recorder." (Definitized P00059 and partially definitized P00062.)
	A00023	616,228	Definitized P00117, ECP 2018B. Added Durabil and Damage Tolerance Design Changes Phase II.
	A00024	515,106	Definitized P00051 and P00062. Replaced AN/ALQ-153 Tail Warning System with AN/ALQ-16 Tail Warning Function.
	A00025	453,200	Definitized P00028 and P00062, ECP 426B. Added Low Observable Antenna Integration.
	A00026	-216,352	CCP-130B - Credit Proposal - Credit effort to delete aircraft configuration item specificat
	A00030	589,607	Definitized P00137. Added LOA/INS Casting Redesign.
	A00031	270,624	Incorporation of CCP 181B. Added Support to Boeing Weapon Preload Tester.
	A00032	271,350	Added "Ground to Cockpit Communications". (Definitizes P00149, ECP 2298B).
	A00033	210,000	Incorporation of CCP 175R. Added LRU Removal Replacement Tracking System.
	P00096	2,044,800,000	Added Lot III (Aircraft 9 through 18).
	P00111	41,487,500	Added "Maintenance Training Equipment, Crew Egress Primary/Secondary Flight Control Trainer (definitizes P00128, P00163, P00070 and P00178).
	P00115	1,252,603	Definitized P00083, ECP 604R, added Durabilit and Damage Tolerance Design Changes.
	P00118	6,042,402	Added Vehicle Support at Rockwell Palmdale Facility.
	P00119	1,775,000	Incorporation of ECP 238R. Added 4th Air Recirculation Loop.
	P00133	23,378,092	Added provisions for the development of Test Requirements Documents for Shop Replaceable Units.

ROCKWELL INTERNATIONAL

Page 8/of 8

FEBRUARY - DECEMBER 1984

CONTRACT #	MOD #	$ AMOUNT	DESCRIPTION
81-C-0210 (Con't)	P00148	$ -11,000,000	Credit effort to Delete Production Reliability Test Requirements.
	P00152	2,143,295	Incorporation of CCP 41. Added Packaging, Handling and Transportability.
	P00159	535,314	Definitized P00055 and P00163. Added Common Strategic Rotary Launcher Integration.
	P00164	3,348,620	Effort to design, install and flight test a Stall Inhibitor System.
	P00171	13,092,879	Added Avionics/Armament Maintenance Trainer Systems.
	PK0002	4,635,274	Definitized P00175 and P00179. Added B-1B Peculiar Support Equipment for Support Equipment Requirement Document Approved Operational Support Equipment Items.
	PK0004	2,365,875	Added Support Equipment for the Computer Integrated Test System (CITS) Ground Processor CCP 1968.
	PK0005	3,122,551	Incorporated CCP 133. Added 14 pieces of On-Aircraft Support Equipment.

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STEPHEN BELL, STAFF DIRECTOR
RICHARD N. BRANDON, MINORITY STAFF DIRECTOR

United States Senate
COMMITTEE ON THE BUDGET
WASHINGTON, D.C. 20510

December 14, 1984

The Honorable Verne Orr
Secretary, United States Air Force
The Pentagon
Washington, D.C. 20330

Dear Verne:

I would like to request copies of all Contractor's Requests for Progress Payments forms (form DD 1105s and SF 1443s), lines 8A (request no.), 8B (date of request), 5 (contract price), and 10 (cost incurred to date) for the B-1 program. I would like these for all B-1 contracts, both production and FSED. I would like this information no later than Monday, December 17 at close of business. My staff has already talked to those who maintain the aforementioned information, and we are satisfied that the December 17 deadline is a reasonable request. The purpose of the request is follow-up to subcommittee business, particularly with regard to hearings last spring before my Judiciary subcommittee.

In addition, I would like a summary of all PCOs (contract change nos.) to the B-1 since the beginning of the program, arranged in columns by PCO number, the corresponding modification description (not to exceed one or two lines), the contract price increase or decrease (indicated by a "+" or "-"), and the obligation increase or decrease. I would like this information by December 31, 1984.

Finally, I would like the extent of work completed to date in the form of equivalent units based on standard hours (Mil. Std. 1567). For this, I would like to have all of the back-up material that shows the calculation of the equivalent units. I would like this information also by December 31, 1984.

Once again, I appreciate your cooperation with regard to such cost analysis information.

Sincerely,

Chuck

Charles E. Grassley
United States Senator

CEG/jw

DEPARTMENT OF THE AIR FORCE
WASHINGTON 20330

OFFICE OF THE ASSISTANT SECRETARY

TAB 3

20 December 1984

NOTE FOR A. E. FITZGERALD

Lest I forget -- at about 1545 yesterday afternoon, I visited SAF/PAM, as invited, to participate in their pre-Christmas revelries. Col Pinckney was among those there assembled, and during some miscellaneous chit-chat observed that Secretary Orr had received a letter from Senator Grassley. He said the letter "could only have been written by Ernie Fitzgerald" and supported the assertion with references to some of the letter's contents pertaining to Standard Labor Hours, MIL-STD 1567, etc., etc. He also observed that Secretary Orr was upset about the Grassley letter.

Colin D Parfitt

COLIN D. PARFITT

TAB 4

DEPARTMENT OF THE AIR FORCE
WASHINGTON 20330

OFFICE OF THE ASSISTANT SECRETARY

20 December 1984

MEMORANDUM FOR MR. FITZGERALD

SUBJECT: "Mickey-Mouse"

After our telephone conversation at about 1230 yesterday, I telephoned Col Pinckney. I relayed your request that AF/RDC provide copies of memorandums, notes, or whatever, concerning telephone calls, and any other communications, from Gerry Olson and LCol Tom Mahler, and any others, providing instructions to James Rose and Wilma Compton (AFPRO, Det 34, BMAC), which changed or "interpreted" the guidance and direction we had specified concerning the data requested from Det 34, among others, so as to comply with the stated needs of the Joint Economic Committee.

Following our discussion at about 0900 this morning, I called Col Pinckney again and relayed your request that, since it takes very little time to xerox a few pages of notes, etc., the data from AF/RDC be provided this morning. Col Pinckney said the request would have to be in writing. I asked if I could put it in writing. He replied that Mr. Carver wanted it in writing and that it would have to come from you.

Colin D. Parfitt

COLIN D. PARFITT

Senator **Proxmire**. Thank you, Mr. Fitzgerald.

Now, I have some questions for Mr. Carver. But, before I do, I understand, Mr. Carver, you have a statement. We'd be delighted to hear it.

STATEMENT OF RICHARD E. CARVER, ASSISTANT SECRETARY OF THE AIR FORCE FOR FINANCIAL MANAGEMENT, REPRESENTING THE AIR FORCE SECRETARY, ACCOMPANIED BY COL. KENNETH V. MEYER, DIRECTOR, CONTRACTING AND MANUFACTURING POLICY

Mr. **Carver**. Mr. Vice Chairman, I have submitted a prepared statement for the record. I won't bore you with reading it; I'm sure you'll have an opportunity to read it.

But it does make a couple of brief points that I think are important.

First, as you know, I'm here representing Secretary Orr, who regrets he's not able to be here. On the other hand, my office, which includes Mr. Fitzgerald, Mr. Parfitt, and Dr. Amlie, has been actively involved in this since I was sworn in, less than a year ago, in attempting to get at some of the very things that we've been discussing here this morning.

So I would simply take from my prepared statement a couple of points that I think are particularly important. One of them is that, in my lifetime in public office, I've held positions of considerable accountability, where the opportunity to philosophize, unfortunately, has not been available, and where the citizens that I represent have required practical solutions to various difficult problems.

Even today, because I spent some time in Peoria, IL—I was mayor of that city for 12 years—there are thousands of people without jobs. Those people don't like philosophy. They like action. They like people to deal with their problems. That's what I've done virtually all of my life. And this is what I hope to do as part of the Air Force.

Secretary Orr, some few months ago, authorized the undertaking of what I have referred to as a cost-management project, an opportunity to even take further those steps that have been taken in recent months and years to see that we get on top of some of the acquisition problems; and, frankly, reach the point where we are absolutely assuring not only yourself and the Members of Congress, but more importantly, the American people that we are using those resources that are so very difficult to provide as efficiently, as effectively as we humanly can.

This requires not only the use of work measures, but it requires very sophisticated cost-tracking and cost-analysis systems. It requires "should-be costs" that really are in fact should-cost systems.

So, as a part of responding to some of the questions you've raised, particularly in the area of work measurement, we have, in the Air Force, in my judgment, been working at getting work measurement as a fundamental part of the way we do business.

And, just recently, the Air Force has adopted a change to a regulation that controls standard 1567A, which does in fact handle standard work-hour measurements, to allow my office to have both the waiver and ultimately the authority for tailoring, so that we can assure that MIL Standard 1567A is used as effectively as it can be.

That is a change. But the cost-management project goes infinitely farther than that. And it's my hope in the coming weeks and months that we will be able to tell you, and other Members of the Congress, that we are in fact truly institutionalizing many changes that have been ongoing for some time.

You made reference, Mr. Vice Chairman, to a purchase that was made in 1982. Outside of the fact that I was serving in the Air Force Reserve in 1982, I had nothing to do with what the Air Force may or may not have been doing.

But, since that time, a great deal has happened. And a great deal of effort has been put forth to try to make sure that we can take these pricing problems and eliminate them.

And I might add that that's caused many of the contractors, including Boeing, to come forward with offers indicating that they will return to the Air Force the overpayments where we can, in fact, document that we have, in fact, been the victim of overpricing.

And I think, again, this is a clear recognition that we have to do something about this problem. The defense of this nation is too important to use any dollar inefficiently.

The Air Force has requirements that it will not be able to meet. And if we don't learn how to use our dollars as efficiently as possible, we're simply further away from those objectives that we think are so important, in order to provide an adequate defense for the American people.

So I personally believe in my travels throughout the Air Force that there is an extraordinary commitment, from Secretary Orr down, to do everything we humanly can within the confines of this organization of over 1 million people—that purchases considerably more than 1 million line items per year—to see that we, in fact, take every step necessary to be as efficient as possible.

You raised a couple of other questions I'd like to specifically address.

Senator PROXMIRE. Before you get into that, let me just ask you something.

I'm very impressed by what you just said. I watched Mr. Fitzgerald in the Department for 18 years. He's testified before this subcommittee in 1968. We were aware of his good work before that. He was given the top award in the Air Force for his remarkable efficiency on weapons analysis back in 1967, as you may know.

And what you've just said is the kind of statement I would expect Mr. Fitzgerald to say if he were in your position. Almost exactly.

In your prepared statement, you say, "I do believe we have made a great progress on the implementation of work measurement." Work measurement is something that Mr. Fitzgerald stands for and has been pleading for, crying for, for years. And if you're making so much progress with a reform that is one of Mr. Fitzgerald's principal assignments, why have you given him what the press has reported as a "poor performance rating"?

Mr. **Carver**. That's an interesting question. And I'd like to respond to it. Some would probably call it something more than interesting.

Senator **Proxmire**. Go ahead. Call it what you like. What would you call it?

Mr. **Carver**. I would frankly say that there has been some degree of notoriety linked to the performance evaluation that I did. I would be very clear in my comments, and this is the way I would like to respond:

Much of that notoriety has been taken dramatically out of context.

Senator **Proxmire**. I'm confused. You're talking about whose notoriety? Your notoriety or Mr. Fitzgerald's?

Mr. **Carver**. Neither one of us. The performance evaluation, Mr. Chairman. I've read about it in newspapers across the face of this country. Good friends write to me and say, "Gee, I just read your name on page 1 of our newspaper." I didn't anticipate doing that quite so quickly. Frankly, I didn't anticipate having to do it quite so quickly.

But, anyway, back to the real question. I arrived here, as my prepared statement indicates, in October of last year. As my prepared statement indicates, I sat down with each of the deputies in my office, of which Mr. Fitzgerald is one. And I examined in great detail what they were doing, what their responsibilities were. And, in the case of Mr. Fitzgerald, I've even indicated—because it links to our efforts at cost management—specifically what his responsibilities are within our office.

Ernie Fitzgerald is the Management Systems Deputy for the U.S. Air Force. He's, in fact, the highest ranking official short of myself, responsible for cost management in the Government.

And so, as a result, it is his job, in fact, to effect change and to effect changes successfully. And in the performance evaluation that I did, it came as the result of the standard process within the Government, which includes SES and GS employees, GM employees—virtually all the civilian force, for each person at the beginning of the fiscal year to adopt a work plan. And each particular individual at the close of the fiscal year is rated. Obviously, that's July.

In this case, I did that for all of my deputies. The difficulty was that Ernie had not had a work plan as such, and to the best of my knowledge, since that particular system was implemented. I happen to believe very strongly not only in assigning authority to individuals, but also assigning accountability.

So, as a result, Ernie and I, through negotiation, and I indicated this in my plan during my statement, not for the reasons I'm trying to do anything more than build on how we came to our project.

But, setting that aside, he and I ultimately agreed in March, some 4 or 5 months after I arrived and after we began discussions concerning the work plan; at the close of the year, I had attempted to do a performance evaluation. I'm not going to go into all the details because I'd like to make a couple of points.

That performance evaluation, I believe—and still believe—should have been a matter between Ernie and me, and the others with whom we are involved in terms of the actual accomplishments of his responsibilities.

Through means other than through myself, that has been made public, which I regret. But, in that particular evaluation, I did not assign an overall evaluation. As a practical matter in that evaluation, I indicated it was my belief that in the coming year, Ernie Fitzgerald, in my office, through our cost-management project—which is one of the principal elements of his goals and objectives—would be successful, that we would be successful. And that we would make significant accomplishments in trying to deal with very important issues, for which you are having this hearing today.

I believe that. And I sense that. But I also said, in not giving Ernie an overall rating, that 3½ months was inadequate, and, as a practical matter, I believe that to be true. Three and a half months, and what appears to be the first work plan that Ernie has had is not a sufficient amount of time to make a thorough judgment.

And so, as a result, in the effort in that regard, it would have to be characterized in that fashion.

So what I would really like to say is this. It is my opinion that Ernie's responsibilities are critical to the success of cost mangement in the Air Force. Ernie's ability to be successful in implementing those responsibilities is equally critical.

And in my prepared statement, and, frankly, in any form that I might be providing it, I would indicate that it's my objective to lend support to those efforts. Ernie works for me; we share in whatever occurs—either good or bad—in these particular efforts.

And I'd like to add, I guess, an addendum to that, even though it's not in specific response to your question. I mentioned AFR 800-9, an Air Force regulation which controls MIL STD 1567A, the military standard for work measurements. When I arrived in October 1984, for whatever reason, the ability of our office to have influence in that area was limited in terms of the regulation then existing.

It's my understanding that the discussions had been taking place for many weeks, maybe months, prior to my arrival. Ernie and I talked about it as well.

But, not too many weeks ago, I indicated to Ernie, amongst other things, that I would see that that regulation was changed. And I would see that our office was included in that regulation as a part of assuring that, in fact, we would have full implementation of work measurement.

That change has been made. And I would indicate that that's an example of the kind of support that I intend to provide, and in my judgment, Secretary Orr and the Air Force intend to provide for our efforts to truly get at cost management; and, ultimately, cost reduction.

Now, that's my view of a rating that was intended to be nothing more than a discussion between Ernie and myself as part of building the accountability necessary for us to be successful, and a part of providing the direction, as I would to any of our deputies, or anybody whose ever worked for me before, in order to understand and agree on what we set out to achieve.

At that point, Mr. Vice Chairman, I would simply be repeating myself.

Senator **Proxmire**. Well, Mr. Carver, I want to apologize because you were making your statement, and I interrupted it to ask a question.

Now, I'm going to interrupt just for a few minutes more, to give Mr. Fitzgerald an opportunity to respond, because I want to get his interpretation of what you've just put before the subcommittee.

Mr. Fitzgerald, go ahead.

Mr. Fitzgerald. I think I'd like to respond primarily—I don't want to belabor the performance evaluation. We're going to do that in another forum. Not belabor it, but deal with it.

But, the matter of the regulations dealing with work measurement, in point of fact, I have a court supervised legal agreement that already gives me, my office specifically, in theory, at least, the authority to provide guidance and direction to the staff and the commands in just these matters.

It's not clear to me, Mr. Carver—whose support I welcome—said, you know, "We're now getting this." It's not clear to me just when I lost it. Because I supposedly had it all along—not in my office.

It's my understanding that the new proposed regulation takes that authority from my office and transfers it to Mr. Carver's. That may be helpful in view of the fact that the military has been running completely out of control in this matter in recent years. But it doesn't really do much to allow me to make commitments which I can personally carry through, because I used to have that authority myself. And I believe I do so under the court supervised agreement, which we entered into in good faith with not only the Air Force but the Department of Justice, who was actually the signer for the U.S. Government.

So it shouldn't really be necessary to negotiate top management's civilian management matters with the military staff. And I think had that fact been asserted sometime back, we could have saved the back and forth that's gone on for the last year in that area, simply by having a straightforward, simple answer to the question:

Do we have civilian control of the military, or do we not?

This seems to me the most important issue that we have in my own personal difficulties at the Pentagon. It's not clear to me, and the reason I haven't taken the matter back to court is that it's not clear whether Secretary Orr is unable or unwilling to control the military.

If it's the latter, of course, I should go back to court. If it's the former, I want to help him. And it's something that ought to sober all of us, the fact that we have to consider whether we have lost civilian control of the military; because I supposedly have the authority right now to issue and have enforced guidance and direction to the military staff and the command.

Senator **Proxmire**. Thank you, sir. Now, let's proceed with your original statement. Then I have some further questions for you.

Mr. Carver. Yes, sir. Mr. Vice Chairman, let me read from my prepared statement because I think, in light of Ernie's comments, I think it would be helpful for those here to understand.

As an extension of my commitment to support Ernie, as well as Secretary Orr's and my own recognition of the importance of work measurement, I have included as attachment 3 a proposed, and it is now, in fact, an amendment to Air Force Regulation 800-9 which specifically designates my office as the location for the ultimate a responsibility for either waiver or tailoring in the use of work measurement within the Air Force.

This means, in effect, that Mr. Fitzgerald is the person involved in our office with these important matters, who will then have the military, working through me, to not only assure the effective implementation of work measurement, but in addition, to assure maximum control over any deviation from the application of this important tool.

I might add all of this is taking place with the complete support of those within the Air Force, who are ultimately responsible for the actual implementation of MIL STD 1567A work measurement.

I don't want to debate Ernie. Ernie and I have had great discussions about his court order, but I will point out that it does specify he, in fact, works under my supervision. It says it in the court order.

I don't even think that's the issue. And I'd like to move in to what I think is the issue in my statement, in closing.

The issue is:

Can we work together?

The issue is:

Can we not only work together but can we work together as a unified force within the Air Force to achieve true cost reduction? To achieve true efficiency and true effectiveness in the expenditure of Air Force dollars?

The bottom line to that, Mr. Vice Chairman, I think, is a matter of extreme importance. I heard the stories at least about one of the items you held up. I don't like those kind of stories, nor does anyone that I know within the Air Force like those stories.

Clearly, Secretary Orr does not. And I've sat in on discussions with him where he has made it extremely clear that we will make the maximum effort to be sure that those kinds of things are reduced to an irreducible minimum and then, hopefully, eliminated. And they should be.

Most of those, if not almost all of those, are issues that have been identified by people within the Air Force. And having visited flight lines, and having visited almost every logistics center that we have, having visited a number of other Air Force bases, I have met with and talked to individual members of the Air Force at all ranks who feel that they are in fact a part of identifying overpricing. They want to do something about it.

At the close of my statement, although I could do on at great length about some of these issues, I would like to think that I've tried to come to the bottom line.

People ask the question:

Why would anyone want to overexpand? Why would anyone want to spend more money than they have to?

I have visited numerous Air Force bases throughout this world, where we have adversaries not to recognize that we can't afford, in terms of the defense of this nation—as I'm sure you know far better than I—to spend, in any way, one dime more than is necessary, because there are too many places to put those dimes, and there are too few dimes available.

Mr. Vice Chairman, I would simply suggest that as far as I am personally concerned, and I'm absolutely sure as far as Secretary Orr is concerned, it is our objective to achieve true cost management and, through that, true cost reduction; to expand competition, and to expand the ability to look at individual items even though we make millions of transactions every year. We will than avoid spending one dime more than we should.

I've asked this gentleman, Colonel Meyer, to come over with us because he is the Director of Contracting and Manufacturing for the Air Force, to respond to specific questions. And, in my statement, and here today, I would indicate that I am not in any sense an industrial engineer nor a person with a great wealth of experience in manufacturing accounting.

I've spent my life in business, however, in the private business of trying to make a profit and in the public business of trying to provide services to citizens. And, in each case, trying to assure that we maximize the use of those dollars.

Mr. Vice Chairman, I have that same commitment in my present job. Thank you.

[The prepared statement of Mr. Carver, together with attachments, follows:]

PREPARED STATEMENT OF RICHARD E. CARVER

Mr. Chairman:

I appreciate the opportunity to come before you this morning to discuss a matter of great interest to me as well as the United States Air Force. As you may have noted from my biography, the bulk of my experience has been either in business or working as the mayor of a city involved in a more traditional form of cost accounting systems.

When I was sworn in approximately eleven months ago, it was clear that the financial management of the Air Force not only was extremely important in terms of the limited resources the American people provide to this very important activity, but it was also equally clear that we must become as efficient and effective as is humanly possible in order to provide the Air Force portion of the defense of the free world. I am sure each American would agree that the very foundation of what we enjoy in this great free country of ours is dependent on how successfully we defend ourselves from those who would like to change not only our system, but the other free nations of the world.

When I first arrived, in the course of getting to know my Deputies better, I sat down with each and attempted to explore in detail not only their responsibilities, but what they were doing to fulfill those objectives as well. Mr. A. Ernest Fitzgerald, the Management Systems Deputy, has not only had a somewhat interesting, as well as difficult from time to time, history of employment with the Air Force, but additionally has an extraordinary set of responsibilities which include:

(a) Integrated performance measurement, cost control and reduction
(b) Economic cost effectiveness analysis
(c) Management information and control systems
(d) Productivity enhancement and measurement
(e) Statistical programs and analysis
(f) Cost estimating and cost analysis.

My first effort with Ernie was to provide the assurance that I would make the maximum commitment to support him in approaching these responsibilities in an organized and directed manner which hopefully would be designed to achieve success. I am sure we would both agree that the successful achievement of cost management and cost reduction in the expenditure of those funds made available to the Air Force by the United States Congress is of maximum importance. As a result of our discussions, we were able to translate that into a cost management project with the complete support of the Secretary of the Air Force.

As Attachment 1 you will find a letter from Secretary Orr to the Air Force Chief of Staff, General Charles A. Gabriel, directing this project and making my office primarily responsible for its execution, and as . Attachment 2 I have included a one-page description of the actual project itself. As you will note, this is not an effort to seek out on a hit or miss basis potential problems of cost overruns or excessive pricing, but rather the more important effort of institutionalizing cost management and cost reduction throughout the entire spectrum of Air

Force acquisition. More importantly, this includes the reaffirmation and more complete introduction of the use of standard work measurement as a part of our examination of the cost of many of our major weapon systems as well as an early warning signal for those contractual efforts that appear to be getting in trouble.

As an extension of my commitment to support Ernie, as well as mine and Secretary Orr's recognition of the importance of work measurement, I have included as Attachment 3 a proposed amendment to Air Force Regulation 800-9 which specifically designates my office as the location for the ultimate responsibility for either waiver or tailoring in the use of work measurement within the Air Force. This means in effect that Mr. Fitzgerald,as the person involved in our office with these important matters, will then have the ability working through me to not only assure the effective implementation of work measurement, but in addition to insure maximum control over any deviation from the application of this important tool. I might add that all of this has taken place with the complete support of those within the Air Force who are ultimately responsible for the actual implementation of MIL STD 1567A, Work Measurement.

I mentioned that I had taken this position just a short eleven months ago, and I also mentioned that I view these efforts to control cost as being of maximum importance to very important goals of efficiency and effectiveness in the use of the taxpayers resources to provide an adequate defense for this country. I also stated that I am clearly not an expert in this area, although I believe that my knowledge has grown substantially since my first introduction to these particular issues. However, I have had occasion to talk to many who are expert, as well as being counseled by Ernie Fitzgerald concerning his experience with work measurement as well. I would today emphasize that it is an important tool that is going to be used by the Air Force as it was intended in order to give us the oversight necessary to track costs as they relate to the development of our major weapon systems or the follow-on support for those same systems after they have been fielded. This however is not the end, but simply a part of the continuing requirement to institutionalize a complete system of cost tracking utilizing automated data processing to the maximum extent as a management tool. We need to reach the point where we have the methods of dealing with our major contractors which relates to our ability to successfully manage and track costs. This is why we have begun a comprehensive project in this area rather than a piecemeal effort which would lend itself unfortunately to not only limited objectives, but also to piecemealing the solutions to these problems which have created so much concern in the past. In the coming months, it is my intent to not only continue to provide support to Ernie as this project unfolds, but to bring to bare additional resources to whatever extent are necessary to make sure that we have not in any way inhibited this effort.

Mr. Chairman, you also requested additional information concerning the legal position related to proprietary pricing information. I have included as Attachment 4 that requested response. I might add, however, that it was at my request that the original letter was written some months ago to be included with Mr. Fitzgerald's testimony in order to avoid any unnecessary restriction on the information that was provided. I specifically protest any implication that it was an effort to restrict his testimony or for that matter to restrict access to information to not only this but any other Committee of Congress. Unfortunately we live in a very complex, legal environment that does not always make the transfer of data easy. However, I will assure you that it is my intent, as well as Secretary Orr's, to cooperate to the fullest extent possible to provide whatever information is required either now or in the future.

In regard to the information provided to you at the October 10th hearing, two of the six contractors' figures were calculated using a base different from the other four. This was not done intentionally and no attempt was made to mislead the Committee. This is a complex area where various contractors do not use like calculations. Subsequently we have received additional data correcting this which can be provided for the record.

To conclude, I have attempted from the very beginning to provide those within my office maximum support with their responsibilities. This particularly includes Ernie Fitzgerald. I do believe we have made great progress on the implementation of MIL STD 1567A, Work Measurement, and I am convinced that it will be a fundamental part of our future contracts with waivers and/or tailoring being included to the minimum extent possible and only after having been reviewed by myself and others within my office.

Given the needs of the American people for adequate defense and given the commitment of the men and women of the United States Air Force to work in providing this defense, none of us could do any less than the maximum to see that we use every resource made available to us by the American people in the most efficient and effective manner possible.

Biography

United States Air Force

Secretary of the Air Force, Office of Public Affairs, Washington, D.C. 20330

RICHARD E. CARVER

The Honorable Richard E. Carver is the assistant secretary of the Air Force for financial management. After being nominated by the president and confirmed by the Senate, he was appointed to the position on Oct. 3, 1984. As assistant secretary for financial management, Mr. Carver is responsible for preparing and justifying the Air Force five-year program and annual budget to Congress. He develops and administers Air Force policies and guidance for weapon system cost estimation and analysis and reports requirements to the Congress. Mr. Carver also provides policy, guidance and supervision to the Air Force Audit Agency, all accounting and finance offices, and to banks and credit unions located on Air Force installations worldwide. He is the Air Force senior information systems policy official and is charged with the oversight of the Air Force comptroller functions.

Mr. Carver was born Aug. 28, 1937, in Des Moines, Iowa. He graduated from Bradley University, Peoria, Ill., in 1959 with a bachelor of science degree in business administration and received the Distinguished Alumnus Award in 1984. Following graduation he was commissioned a second lieutenant in the U.S. Air Force through the Reserve Officer Training Corps program. He was assigned to Grissom Air Force Base, Ind., and was responsible, among other duties, as a project officer working on the initial program for the mechanization of personnel records.

In 1962 he was named president of Carver Lumber Company, Peoria, Ill., a position he retained until becoming an assistant secretary of the Air Force. Mr. Carver was elected to the Peoria City Council in 1969 and was elected the mayor of the city of Peoria in 1973. As mayor he began what became one of the most significant urban renaissance of any middle-sized city in the United States. During this same period, he served as president of the U.S. Conference of Mayors, president of the National Conference of Republican Mayors, a director of the National League of Cities and a member of the Advisory Commission on Intergovernmental Relations. In 1982 he was appointed to the President's Commission on Housing and in that capacity served as chairman of the Federal Housing Programs Committee. He has lectured on issues related to municipal finance, urban economics and a broad range of housing issues before various groups throughout the United States. He resigned as mayor of the city of Peoria in order to accept the position of assistant secretary having completed 11½ years in office.

He is a colonel in the U.S. Air Force Reserve, was assigned as a liaison officer commander for the U.S. Air Force Academy, and presently is assigned to the Office of the Deputy Chief of Staff for Programs and Resources.

Mr. Carver is also an officer of the Methodist Medical Center of Illinois, a director of Economic Development Council for the Peoria area, a trustee of Bradley University, an honorary

(Current as of July 1985)

member of the Peoria Rotary Club, a past director of the Illinois State Chamber of Commerce, as well as being a former officer or director of many other organizations both private and public.

He is the recipient of numerous awards including Peoria's Outstanding Young Man of the Year, the Jaycee's Good Government Award, Phi Gamma Delta's National Distinguished Alumni Award, and the regional award as the Outstanding Liaison Officer Commander for the U.S. Air Force Academy. He is listed in Who's Who in American Politics and Who's Who in America.

Mr. Carver is married to the former Judith S. Corley of Champaign, Ill. They have four children: Kathryn, Stephen, Cynthia and Susan. The Carvers reside in Washington, D.C.

DEPARTMENT OF THE AIR FORCE
WASHINGTON, D.C. 20330-1000

OFFICE OF THE SECRETARY

APR 10, 1985

MEMORANDUM FOR THE CHIEF OF STAFF, USAF

SUBJECT: Cost Management

On April 13, 1982, I transmitted a letter to you indicating my concern about the number of Air Force programs experiencing serious cost problems. In that letter I set out certain steps that should be taken in order to strengthen our ability to deal with cost analysis and cost management.

Although considerable improvement was accomplished as a result of that initiative, there is still clearly much to be done.

Based on a recent briefing by Dick Carver, I am requesting that SAF/FM take the lead in reenvigorating the previous initiative, working with the Air Staff, SAF/AL, AFSC, AFLC, and AFCC.

I would appreciate the Air Staff providing strong support for this very important project with the clear expectation that this will further enhance our ability to deal with these very important problems. Mr. Carver will be working with the Air Staff to develop the specifics of the work plan including the makeup of the various working groups that will be a necessary part of this effort.

Secretary of the Air Force

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ATCH 1

DEPARTMENT OF THE AIR FORCE
WASHINGTON, D.C. 20330

OFFICE OF THE SECRETARY

April 13, 1982

MEMORANDUM FOR THE CHIEF OF STAFF, USAF

SUBJECT: Cost Management

Within the past several months, I have become increasingly concerned about the number of Air Force programs which are experiencing serious cost problems. We have just transmitted to the Congress the first formal reports under the Nunn Amendment on six systems which have breached 15% or 25% cost growth thresholds (F-15, F-16, A-10, Maverick, DSCS, AIM-7M). While I recognize that cost growth in some of these programs is a product of our commitment to significant production increases which entail added years of procurement and associated inflation costs, in many cases we could have done a better job of estimating and/or controlling system development and acquisition costs. For various other reasons, programs such as B1-B, airlift, DSCS, IUS, Seek Talk and Lantirn, have further heightened my concern. As we have both seen in our hearings with the Congress, there is sensitivity to this problem. We must prevent any perception that poor management is characteristic of Air Force programs. It is important that we make a vigorous effort to improve our cost management performance and image across-the-board.

Within the Secretariat we have already taken some steps to strengthen our capability in the cost area and to improve our oversight on both cost estimating and cost management performance.

- I have designated the Assistant Secretary for Financial Management as the focal point for all matters concerning cost and charged him with reviewing and certifying as to the quality of all cost data to be presented at program acquisition milestones and during our regular program management reviews.

- I have approved a modest augmentation in the SAF/FM staff to improve our internal cost monitoring capability.

- SAF/FM has placed a member on the Air Force Cost Analysis Improvement Group (CAIG) who will participate in all future CAIG reviews.

- SAF/FM has assumed management responsibility for Nunn Amendment reports in addition to the regular SAR reports and will be responsible for the final approval of the data and supporting analysis associated with those reports.

- SAF/FM is undertaking a broad survey of the effectiveness of C/SCSC and related reports across the entire range of Air Force acquisition programs and contracts.

- SAF/FM is working closely with AF/AC to strengthen the role of the Air Force CAIG in the cost review process.

While these efforts will strengthen our capabilities and enhance our confidence in the quality of the cost data we are using, I believe we must undertake a more fundamental review of both our cost estimating and our cost management and reporting procedures. I have asked Russ Hale to lead this effort, working with the Air Staff and AFSC. I have also asked the Assistant Secretary for Research, Development and Logistics, Dr. Keel, to work closely with Secretary Hale on this project.

I expect the output of this review to include identification of the problem areas with specific recommendations for implementing changes in the way we currently estimate, manage, monitor, and report costs for the acquisition process. Mr. Hale is preparing a work plan outlining the approach he will take in commencing his initial effort, and will be discussing it with the Air Staff over the next two weeks. Since OSD, GAO, and the Congress are actively studying ways to impose greater control over cost growth, we must quickly take action to strengthen our internal capability to minimize cost increases.

I request that you give this effort your full support.

Verne

Verne Orr

DEPARTMENT OF THE AIR FORCE
WASHINGTON 20330

OFFICE OF THE ASSISTANT SECRETARY

COST ANALYSIS AND COST MANAGEMENT PROJECT

On 13 April 1982 the Secretary of the Air Force directed a letter to the Chief of Staff indicating that the Office of the Assistant Secretary of the Air Force (Financial Management) was authorized to undertake a project to examine cost analysis and cost management in the Air Force. In many respects this is an extention of earlier efforts which have clearly represented progress in this very important area, but as yet have not produced a comprehensive system of cost tracking and analysis in our major acquisitions.

This project will be led within the Secretariat by the Management Systems Deputy, supported by the other members of the office of the Assistant Secretary together with support from the Air Staff provided by the Comptroller.

Although the major new systems development takes place in the Air Force Systems Command, we also have similar efforts within the Logistics Command as well as the Communications Command. In each case it is important that we have an institutionalized system which uses automatic data processing to the maximum extent to both track as well as analyze the cost of these major programs. In some cases, this will involve streamlining some of the overlapping reporting requirements where in other instances it will clearly require a more comprehensive standardized methodology of accounting.

The essence of the program must be to develop the methods for accurately defining the weapons systems we propose to develop and acquire, as well as identify the methodology for cost analysis that will produce the information necessary to price the project at its lowest possible cost. In addition these systems should be sufficiently standardized to allow for cost comparisons as well as indepth cost tracking.

It is clear that we should be able to analyze not only the cost of processing of our major contractors, but we should be able to do it in such a way that we accurately project future costs as well.

The obvious intent of this project is to establish the means by which we provide the assurance to the Congress as well as the American people that we are expending their resources with the greatest degree of efficiency and effectiveness. In addition this is the only method by which we can assure the best defense for our country, given the limited resources available.

June 10, 1985

ATCH 2

PROPOSED AMENDMENT TO AFR 800-9

When a MAJCOM determines that application of MIL STD 1567A should be waived for a particular program, a request for waiver will be forwarded to AF/RD for staffing as appropriate with a copy direct to SAF/FM. (Approval authority for waivers to MIL STD 1567A is the Assistant Secretary of the Air Force, Financial Management, SAF/FM, and the authority cannot be delegated.) If the MAJCOM has not heard to the contrary within fifteen working days of the date that the request for waiver was forwarded, it is presumed to be approved and the MAJCOM is authorized to proceed accordingly. The product divisions, ALC's, and comparable levels of command are authorized to approve tailoring of MIL STD 1567A when deemed appropriate to enhance the efficient and effective administration of a particular contract program. MAJCOMS will provide an information report on approved tailorings to AF/RD for subsequent forwarding to SAF/FM who may review decisions on tailoring to ensure a consistent, cost effective application of MIL STD 1567A.

DEPARTMENT OF THE AIR FORCE
WASHINGTON 20330

OFFICE OF THE GENERAL COUNSEL

September 4, 1985

Memorandum for Mr. Carver, SAF/FM

SUBJECT: Proprietary Business Information

This is in response to your request for further legal guidance, in addition to that contained in our August 9, 1985 memorandum to you, regarding the circumstances under which business information may be publicly disclosed when it is obtained from Government contractors. Your oral request was accompanied by an August 23, 1985 memorandum from Mr. A. E. Fitzgerald to you. That memorandum appears to raise the following issues: (1) whether cost and pricing data on negotiated contracts is a "trade secret" and (2) whether 10 U.S.C. §2276 is violated by Air Force contracting personnel accepting cost and pricing data from offerors under a promise of confidentiality. These issues are addressed below.

The Federal Acquisition Regulation (FAR) provides a definition of "cost or pricing data" in PART 15 - CONTRACTING BY NEGOTIATION, SUBPART 15.8 - PRICE NEGOTIATION, SECTION 15.801 Definitions:

> "Cost or pricing data means all facts as of the time of price agreement that prudent buyers and sellers would reasonably expect to affect price negotiations significantly. Cost or pricing data are factual, not judgmental, and are therefore verifiable. While they do not indicate the accuracy of the prospective contractor's judgment about estimated future costs or projections, they do include the data forming the basis for that judgment. Cost or pricing data are more than historical accounting data; they are all the facts that can be reasonably expected to contribute to the soundness of estimates of future costs and to the validity of determinations of costs already incurred. They also include such factors as (a) vendor quotations; (b) nonrecurring costs; (c) information on changes in production methods and in production or purchasing volume; (d) data supporting projections of business prospects and objectives and related operations costs; (e) unit-cost trends such as those associated with labor efficiency; (f) make-or-buy decisions; (g) estimated resources to attain business goals; and (h) information on management decisions that could have a significant bearing on costs.

This definition applies to cost or pricing data submitted to the government both by offerors for negotiated prime contracts or by potential subcontractors to those offerors. FAR §15.800.

Our August 9 memorandum to you quoted the relevant provisions of 18 U.S.C. §1905, the Trade Secrets Act. By its specific terms §1905 applies not only to "trade secrets," but also to ". . . processes, operations, style of work, or apparatus, or to the identity, confidential statistical data, amount or source of any income, profits, losses, or expenditures of any person, firm, partnership, corporation, or association. . . ." In our view, the scope of §1905's disclosure limitation includes the type information which is stated in the definition of "cost or pricing data" contained in FAR §15.801.

That view is based not only on a comparison of the language of §1905 and FAR §15.801, but also the Supreme Court's reference to the scope of the Trade Secrets Act in Chrysler Corp. v. Brown, 441 U.S. 281, (1979). As was noted in our August 9 memorandum, the Supreme Court in Chrysler primarily addressed Exemption 4 of the Freedom of Information Act (FOIA), which provides that the disclosure requirements of the FOIA do not apply to matters that are "trade secrets and commercial or financial information obtained from a person and privileged or confidential." 5 U.S.C. §552(b)(4). The Court noted that although there was a "theoretical possibility that material might be outside Exemption 4 yet within the substantive provisions of §1905," it was of "limited practical significance in view of the similarity of language" between the two provisions. Id. at 319, n.49. The Court continued by indicating that the practical effect of §1905 is to limit an agency's ability to make a discretionary release of otherwise-exempt material, because to do so in violation of §1905 would "constitute a serious abuse of agency discretion" presenting the possibility of a "reverse" FOIA suit.

Mr. Fitzgerald, in his August 23 memorandum to you, also indicated that he requested this office ". . . to include in [SAF/GC] legal guidance memo examples of cost and pricing data obtained by Rockwell on B-1 negotiated subcontracts and by General Dynamics on F-16 negotiated subcontracts." Since the FAR definition of cost or pricing data encompasses a very wide range of business and financial information which is made available to the Government in instances involving negotiated contracts, an examination by this office of a limited number of examples of such information would appear to serve no useful purpose. Accordingly, we have not included such examples or commented on them.

A second issue raised by Mr. Fitzgerald concerns acceptance by Air Force personnel of cost or pricing data which contain a restrictive legend which prohibits its disclosure outside the Government and whether such acceptance constitutes a violation of 10 U.S.C. §2276. Mr. Fitzgerald's memorandum indicates his assumption that the agreed upon restrictions on release of cost and pricing data apply to the Congress. This assumption is incorrect.

Department of Defense audits of contractor costs are not made pursuant to 10 U.S.C. §2276, which pertains to equipment furnished under Chapter 135 of Title 10. Rather they are conducted pursuant to the audit provisions of Chapter 137 of Title 10, the Armed Services Procurement Act (ASPA), as amended. Like the provisions of 10 U.S.C. §2276, the audit provisions of the ASPA (10 U.S.C. §2313 and §2306(f)(5)) give the Government the right to inspect the plants and audit the books and records of its contractors. The information obtained is available to Government auditors and Air Force personnel, the General Accounting Office, and the Congress. It is not releasable outside the Government, however, when the information obtained is covered by 18 U.S.C. §1905, the Trade Secrets Act.

Further, Contractors generally submit their cost and pricing data in confidence and the FAR prescribes methods by which submitters of information to the Government may assert that the information is proprietary and wish it to be kept confidential. For example, FAR §52.215-12, Restriction on Disclosure and Use of Data, contains a prescribed legend the use of which permits submitters to restrict the use of their information during the negotiating process. The legend states:

> This proposal or quotation includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed - in whole or in part - for any purpose other than to evaluate this proposal or quotation. If, however, a contract is awarded to this offeror or quoter as a result of - or in connection with - the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. * * *"

Also, FAR §15.1003(b)(3) provides that during the debriefing of unsuccessful offerors the Government shall not reveal any information which is not releasable under the Freedom of Information Act. Such nonreleasable information includes: (1) trade secrets; (2) privileged or confidential manufacturing processes and techniques; and (3) commercial and financial information that is privileged or confidential, including cost breakdowns, profit, indirect cost rates, and similar information.

During the contracting process, the Government has obligated itself in good faith not to disclose cost or pricing data submitted to it in confidence. Exemption 4 of the FOIA was designed to enable agencies to honor that obligation. See e.g. H. R. Rep. No. 1497, 89th Cong., 2d Sess. 10 (1966). To release data covered by 18 U.S.C. §1905 to the public could "constitute a serious abuse of agency discretion" and subject the Government to suit by the submitter of the data. We are not, however, precluded from providing the data to the Congress, when requested, but the data cannot be disclosed by a Government witness in an open hearing.

We must again point out that it is the Department of Justice, and not this office, which makes decisions regarding possible prosecutions under Federal criminal statutes. 28 C.F.R. §0.55. Accordingly, with regard to the potential for violations of these criminal statutes, this memorandum does not offer any opinion concerning a specific violation of 18 U.S.C. §1905 or any other Federal criminal statute. Our views with regard to these criminal statutes are intended to be advisory only.

We hope this further explanation regarding the above-raised issues will be helpful.

Durward E. Timmons
Deputy General Counsel

Senator **Proxmire**. Thank you very much, Mr. Carver. You were present when I asked Mr. Fitzgerald and Mr. Parfitt about whether the Air Force attempted to intimidate them in their appearance last year.

Do you deny that Mr. Parfitt was told to answer questions by this subcommittee only in generalities? And that warnings about violations of criminal laws were meant to scare them and restrict their testimony?

Mr. **Carver**. Mr. Vice Chairman, I'm not a lawyer, but let me tell you what I think happened, because I, at least, was present for part of the discussion at the Air Force prior to the testimony being provided.

I had asked and have received from the General Counsel's Office legal opinions relative to proprietary date. The September 4 letter from the Deputy General Counsel, Mr. Durwood Timmons, that you made reference to earlier, indicates that not only trade secrets but commercial or financial information obtained from a person can be privileged or confidential. I didn't create the situation under the Freedom of Information Act but, clearly, they are dealing with the exemption.

If you'll read Mr. Timmons' letter completely together with his earlier commentary on propriety information—at least, I, as a layman, can come to a couple of conclusions.

First, that we do receive certain pricing information that has been used by the contractor in order to determine how they will price the Air Force, either through their subcontractor or the primary contractor. That information can in fact often be proprietary and subject only to disclosure within the Air Force, the Government, or to the Congress. But, not necessarily to the general public.

In the discussion last fall with Mr. Timmons present and Mr. Fitzgerald, the issue came up about the release of the data that he was to come over and testify concerning, data that I might add, I'm told at least, was provided by our Air Force Plant Representative Office as examples of pricing within those particular areas.

So, as a practical matter, the information was provided by the Air Force. The examples were selected by the Air Force. But, in that context, I suggested to Mr. Timmons that if there was a concern, it ought not be in release of information to yourself or other Members of the Congress. So that, as a practical matter, Mr. Timmons drafted a cover leter on the specific data indicating that the information may be proprietary. And in his legal opinion, that was written some weeks or months ago, he indicated that, in his opinion, at least, that the only ultimate decider when it appears that it may be proprietary could, in fact, be the courts.

I don't know the answer to that myself. But, when Mr. Fitzgerald and Mr. Parfitt came over here, at least from my limited knowledge of the situation, they were told that they were more than free to release the information to yourself by contractor, by detail, but that, in fact, by releasing it publicly, the Air Force, not they as individuals, but the Air Force might be subject to challenge by the provider of the private contractor of that information, as having released proprietary data.

The cover letter did in fact state that. So, as a result, I don't think there was any effort to intimidate anybody. And I can assure you that my part of the discussion was clearly not that.

The effort was in fact to assure that the Air Force did not find itself in the position of liability in what was then, and probably even today, a questionable circumstance unless we choose to go to court to adjudicate the issue.

Senator **Proxmire**. Isn't it correct that you and others in the Air Force were concerned that Mr. Fitzgerald and Mr. Parfitt would reveal information about high-price markups that would be embarrassing to the Air Force? And would point to the fact that overpricing is pervasive and not limited to a few horror stories?

Mr. **Carver**. Mr. Vice Chairman, I hate to say it but I think there's enough information available to me today that I'm not worried about being embarrassed. I'm worried about solving the problem.

Senator **Proxmire**. Mr. Vergil had asked the Air Force on October 9, 1984, for a legal memorandum describing the criteria for trade secrets involving cost and pricing data in negotiated contracts.

You stated you were concerned about going to court and concerned about the legal situation. Such a memo is attached to your prepared statement and dated September 4, 1985, just 2 days ago.

Why did it take so long for the Air Force to produce a written justification for the gagging of Mr. Fitzgerald a year ago?

Mr. **Carver**. Two or three points, Mr. Vice Chairman.

First, the legal memorandum was written some months ago. I don't have it in front of me, so I can't refer to it. Unfortunately, it did not refer to proprietary pricing data. And so, at my request a few weeks ago, Mr. Fitzgerald identified that we had that gap as a result of a letter which has been sent to Secretary Orr. We did, in fact, get this particular memo specifically on proprietary pricing data from the General Counsel's Office.

If there was an error made some months ago in not including pricing data.

Senator **Proxmire**. It took you 11 months to produce it for the subcommittee?

Mr. **Carver**. No, sir. Well, I can't respond to that, Mr. Vice Chairman, I'm not the General Counsel's Office. But, let me go back and repeat the point.

I'm not personally aware of a specific request to the Air Force for the kind of documentation you describe; if it exists, I personally at least regret that I was not aware of it.

On the other hand, I had made personally requests of the General Counsel's Office in support of Mr. Fitzgerald to get the type of legal definition or legal opinion that you describe.

Senator **Proxmire**. Let me just interrupt at this point because it's important.

Mr. Fitzgerald, did you make such a request last October?

Mr. **Fitzgerald**. Yes, sir, I certainly did. Not only that, but I asked for specific examples of cost and pricing data swapped between contractors and real and potential competitors.

I still have not seen an answer. In the first place, I've received no answer at all to my memorandum, or my memorandums. I wrote several.

But, more particularly, the September 4 memo does not deal with the fact, and it is a fact, that this kind of information is freely traded among competitors, which, in any reasonable understanding of what a secret is, removes these data from the category of being secret.

Senator PROXMIRE. Mr. Fitzgerald, I have in my hand a letter, a memorandum, signed by you, dated October 9, 1984, Subject: Legal Guidance, Memorandum for SAFGC.

Is that it?

Mr. FITZGERALD. Yes, sir. The General Counsel—GC— is the designation. I believe either at that time or another time, I addressed maybe a copy of the same one to the Legislative Liaison Office, which would be designated LL. I received no answer from the either—none at all.

But the key point that needs to be made is how information freely swapped between competitors can be called a "trade secret." The General Counsel has never touched that one with a 10-foot pole.

Senator PROXMIRE. Let me just read the paragraph that I think is critical here. You say:

"Since Mr. Timmons was not sure how or in what form our prime contractors on negotiated contracts obtained needed subcontractor cost and pricing data, I asked him to include in his memo examples of cost and pricing data obtained by Rockwell on the B-1 negotiated contracts and by General Dynamics on F-16 negotiated contracts. I further suggested that the requested B-1 and F-16 information could be forwarded in unedited form by datafax."

That was October 9, 1984, 11 months ago. Is that correct?

Mr. FITZGERALD. Yes, sir. I received no answer to that other than the assertion, which was not to me, incidentally.

Senator PROXMIRE. Mr. Carver, I understood that you just told us there was no official request.

Mr. CARVER. No, sir. I said that there was to the best of my knowledge no official request on behalf of the subcommittee. So as a result, the request that I personally made in response to that particular letter, recognizing that I had 3 weeks seniority at the time, was to get a response from the General Counsel's Office to that question in order to be able to provide to the people who work for me the knowledge of how to deal with the proprietary data. That was the ultimate reason that we received some weeks, or months ago a legal opinion from Mr. Timmons.

Senator PROXMIRE. So what you are telling me is that you felt because the request was from Mr. Fitzgerald and not from the Congress you could wait 11 months to give them an answer?

Mr. CARVER. No, sir.

Senator PROXMIRE. Is that what happened?

Mr. CARVER. Mr. Vice Chairman, the response came from Mr. Timmons. I would like to have had it 10 months ago. Frankly, some days I don't understand why my personal lawyer takes 10 months to do things, and that doesn't help me try to understand how the Air Force lawyers sometimes take 10 months.

But the fact remains he did issue the opinion. I would concede to you it should have been much earlier, but nevertheless that, combined with the September 4 memo specifically on pricing, was in response to that request, supported by and reinforced by my own personal request, both verbal and in writing, to get the same kind of data.

Senator PROXMIRE. Let me get to some of the substance here.

How do you respond to Mr. Fitzgerald's argument that cost and pricing data are obtained by prime contractors from their subcontractors and so readily exchanged within the defense community that they cannot be considered trade secrets; they do not come under the protection of the laws concerning trade secrets or proprietary information?

Mr. CARVER. I guess in two ways, Mr. Vice Chairman. Again using the ovious caveat that I am not an attorney, I would suggest, one, that the issue I thought was before us was whether the pricing data that we were providing last fall was proprietary or not proprietary, and that was in fact provided by the Air Force as a part of our means of contract negotiating and getting the pricing information that we require in order to acheive that goal.

In addition to that, I am the first to concede that subcontractors of prime contractors do in fact furnish that pricing information to the prime contractor as a part of their negotiations. But I have to go one step further and say that I am personally not aware of major prime contractors behind everybody's back trading information back and forth. I understand, in my limited knowledge, that there are a few laws against that, but in addition to that I am not specifically aware of that actually occurring and I personally have no examples of that having occurred.

Senator PROXMIRE. How about that, Mr. Fitzgerald?

Mr. FITZGERALD. I don't think it is behind anybody's back. As Mr. Carver said, it is perfectly open and straightforward and in accordance with the law, the Truth in Negotiations Act.

And we have quite a few examples. I have a whole folder full of them that we collected from Boeing-Wichita. There was no problem getting these once we went to the plant and got beyond the military staff in the Pentagon, who incidentally were cited as the authority by Mr. Timmons for his actions when we made contemporaneous memorandums of that fact when discussing it.

But you know, I picked up examples.

Senator PROXMIRE. Could you supply those examples?

Mr. FITZGERALD. Of course I will. I picked up examples of cost reports and price analyses done by Boeing on Westinghouse and a sample of a report submitted by Boeing, I am told, to their prime contractor on the B-1, Rockwell. The same kind of markup factors that we are talking about here are supposed to be included more or less across the board. We negotiate forward pricing and billing arrangements with contractors. Those are deviated from somewhat but not a great deal.

Mr. CARVER. Mr. Vice Chairman, can I respond for a second? I named two examples. I want to go back to that.

I indicated, if you want to take Rockwell as an example in the B-1 bomber, we have so many subcontractors that there is in fact within the B-1 contract the sharing of information that is a part of the legitimate pricing process.

What I was responding to is the sharing between competitors of pricing information that is unrelated to a joint venture or existing contractual or negotiated positions, and I want to make those exceptions. Clearly, there is no question that many contractors that exist in the aerospace industry do business with each other as part of the production of a weapons system such as the B-1B. They do in fact negotiate between themselves, and as a result, obviously, as part of that process they exchange pricing data just as the Air Force does with them in terms of our obtaining pricing data as a part of our negotiations.

I again would suggest in Mr. Timmons' September 4 memo he makes reference to the Federal acquisition regulations. In fact, he goes further forward to discuss and explain cost and pricing data in terms of its definition, and clearly it does include those kinds of legitimate sharing of prices.

What I thought we were discussing are two companies who are in competition with each other sharing pricing data on items with which they are competing. Again, in my limited realm of information, that is illegal.

Mr. FITZGERALD. I would just like to point out that these markup formulas which are negotiated are for sole source spares procurement and support equipment procurement. The factors that are included in the markup formula are the same factors that are used on the larger items and in the swap of data back and forth. So it is not necessarily the item that is involved, Mr. Vice Chairman, Mr. Carver; it is the cost factors that are involved that are most important.

And this is important to understand for another reason. Mr. Carver mentioned the difficulty of millions of transactions, which is actually correct. We have a monstrous problem before us, but we have before us the simple solution to that problem, across-the-board systematic, which we were seeking to employ prior to our getting stymied a while back, and that was to negotiate lower markup formulas.

You don't have to negotiate separate prices for each one of the little gadgets that you have there, Mr. Vice Chairman. If you negotiate a lower markup formula, such as we have on this chart, then everything you buy from Pratt & Whitney will be less expensive. We don't need to negotiate millions of prices. We need to negotiate in the Air Force 25 new pricing formulas to take care of the great bulk of our overpricing.

Senator PROXMIRE. Mr. Carver and Mr. Fitzgerald, you have been most responsive and I appreciate it, maybe too much, too responsive. I want to see if we can cut down on the time it takes to answer these questions. We have what I think are some very critical questions here. So I would appreciate it very much if you could confine your answers to 15 seconds or 30 seconds, or whatever. The shorter the better.

Mr. Carver, isn't the effect of the Air Force policy to prevent the taxpayer from knowing the truth about high-price markups and to help the contractors cover up that problem?

Mr. CARVER. Absolutely not, sir.

Senator **Proxmire**. Will you provide us with the names of six contractors for whom price markups were provided last year, or do you intend to continue to conceal it?

Mr. **Carver**. Mr. Vice Chairman, not only did we not intend to conceal it last year, and talking about making them available to Congress in detail——

Senator **Proxmire**. I am talking about the names. I still don't have them.

Mr. **Carver**. Mr. Vice Chairman, the information that I saw leave my office had the names on it, and I will absolutely assure you that it will have the names on it in the future.

Senator **Proxmire**. I am going to ask Mr. Kaufman to follow up on that question.

Mr. Kaufman.

Mr. **Kaufman**. Mr. Carver, are you saying then that the Air Force has no objection to disclosing the names of the proposed companies to the public?

Mr. **Carver**. You are talking about the public disclosure. I would have to defer that to the Air Force General Counsel's Office, who in my judgment, unless there is a legal prohibition from doing so, in their opinion, that we are creating a liability for the American taxpayer, clearly we would have no objection whatsoever.

Mr. **Kaufman**. You are saying you are willing to disclose the names to the congressional committee but not to the general public, and you are instructing the congressional committee to not disclose them to the general public because that might violate the laws protecting trade secrets or proprietary information?

Mr. **Carver**. Again, I would just suggest this: If we can determine that is releasable information without committing a liability for the American taxpayer we would be delighted to do so.

Mr. **Kaufman**. Have you made such a determination for the six contractors that we are talking about?

Mr. **Carver**. Sir, I am not aware of that, but I certainly can get an answer to that particular question equally as much as I can get an answer to any other specific contractors or specific pricing data that might come into question. We would be delighted to do so.

Mr. **Kaufman**. You will then provide that for us?

Mr. **Carver**. Yes, sir.

Senator **Proxmire**. In his letter of August 16, Mr. Carver, Mr. Fitzgerald informed me that the information provided to the subcommittee concerning one of the contractors was incorrect and misleading in that it understated the price markup by a large factor. I asked the Air Force to verify all the information supplied last year, and in your statement you admit that the data for two of the contractors was not correct.

What are the names of the two contractors, and did the data understate or overstate the price markup?

Mr. **Carver**. I have asked Colonel Meyer to come along, and he has specific information in that area.

Again, with the caveats that I have presented, maybe Colonel Meyer knows the answers as to the releasability of the information. He does in fact have the data and will be delighted to give it to you.

Senator **Proxmire**. Go ahead, sir.

Colonel **Meyer**. Mr. Vice Chairman, first of all, the data that was given to the subcommittee at the last hearing, or shortly after that hearing, Mr Fitzgerald asked us to take another look at that data. We have done that. There was certainly no intent to mislead the subcommittee in any way, and as Mr. Fitzgerald stated earlier, in fact one of the prices was done on the wrong basis and has increased from a number in the hearing last year, from a $92.10 figure to a $184.39 figure, which is roughly doubled the cost that was presented.

That is one case.

Senator **Proxmire**. The markup was really twice as much as you showed us last year?

Colonel **Meyer**. It was, sir, and the reason for that was it was figured on the wrong basis on that part.

The other case involved the contractor which had the highest cost, which was $340.76. In this case there was an error made in the standard hour content of that work. Some of the standard hours were left out. That cost has now come down to $115.03, or roughly a third of the cost that was reported to the subcommittee.

Senator **Proxmire**. Can you provide the names of the firms?

Colonel **Meyer**. Sir, I cannot provide that for the record.

Senator **Proxmire**. You can't provide it—it can't be made public? Is it proprietary information?

Colonel **Meyer**. It was given to us as proprietary information; yes, sir.

Mr. **Carver**. Mr. Vice Chairman, we will respond in the context of my earlier answer and hopefully do so in such a way that if there is any chance at all that it is releasable we would be delighted to let you know.

Senator **Proxmire**. Mr. Carver, when did you first learn that this subcommittee had been supplied incorrect information by the Air Force?

Mr. **Carver**. About 3 days ago, Mr. Vice Chairman.

Senator **Proxmire**. Didn't Mr. Fitzgerald inform you in December 1984 in his trip report that the information from at least one of the contractors was incorrect?

Mr. **Carver**. Mr. Vice Chairman, if Ernie Fitzgerald says he did, I take his word for it. I have never in my life met a man that has a better memory than Ernie. So as a result, that could be actually correct.

I am suggesting to you that my recollection is only from a few days ago, and as a practical matter, at that time it may not have registered with me in the context of this hearing or any follow-on hearings. But if he says he did, I will take his word for it.

Senator **Proxmire**. Mr. Fitzgerald, did you advise Mr. Carver?

Mr. **Fitzgerald**. Yes, I did, Mr. Vice Chairman, and in addition, Mr. Carver got a long memorandum on this same matter on January 16, 1984.

Mr. **Carver**. Can I ask a question? Didn't I follow up with a memo to the Air Staff, asking them to give us the correct information?

Mr. **Fitzgerald**. I believe you did, sir.

A word of clarification to Colonel Meyer, we had two cost figures previously on the contractor that he says went from $340 to $115.

We had one segment of their work that was priced at $52 a standard hour, to help you identify the contractor.

Senator PROXMIRE. May I ask you, Mr. Carver, why didn't you inform us? Why did it take you so long to inform us about the error?

Mr. CARVER. Well, Mr. Vice Chairman, I would like to have a nice, clever, sophisticated answer. I don't have one. The answer is, frankly, at the time it didn't occur to me, and I suspect if it reoccurred it would occur to me. But at the time my personal interest—that is why I interrupted Ernie for a second—was frankly to get the right information. I don't like to get bad information myself, so I guess it was more because of my personal concern for our work than it was for the information we provided.

I apologize for that, but that is the answer.

Senator PROXMIRE. Mr. Carver, you heard the earlier discussion about the high-priced Boeing parts.

Do you agree that $162.85 for this screw and $1,252 for this metal bar are outrageously high?

Mr. CARVER. Well, Mr. Vice Chairman, I don't also own a VCR. My income doesn't happen to stretch that far either. I wouldn't want to have to pay that much for those parts.

I have had a very interesting experience of having a lot of young enlisted people walk up to me and do the very same thing. The same people who have jumped up and down and, I might add, the people who have had at least a major effect on us avoiding making those same mistakes in the future.

Senator PROXMIRE. Let me show you another spare part. This metal plate, 9¾ inches by 3¾ inches, for a B-52 is also a Boeing product, and the Air Force bought 10 of them in 1982 for $1,750, $175 each.

Mr. CARVER. The only response I can make, Mr. Vice Chairman, is the president of Boeing has said that he would like to give us back money when we have been overpriced and we would like to get it back.

I have never seen the part before. I have never heard the comment before. Clearly, if we have not already followed up on that, we should.

And I would simply repeat that there are many other examples that have been pointed out by members of the Air Force that we have addressed and have done something about, and we continue to try to fight that battle very strongly. That is why the Air Force on its own initiative was first to set up a competition advocacy program.

Senator PROXMIRE. It so happens the Air Force paid such outrageous prices for these parts that the Small Business Administration learned about them and persuaded the Air Force to invite competitive bids for follow-on buys. The price of a screw went down from $162 to $13.48; the plate went from $175 to $7.47, and the bar went from $1,253 down to $52.27, an enormous reduction in price simply by asking for competition.

Why did the Air Force pay so much in the first place?

Mr. CARVER. I have a sneaking suspicion that the reductions in price came as a result of our going to the prime source rather than dealing through the prime contractor in order to purchase those kind of products. As a matter of fact, I have seen literally thousands of items that we have purchased on the same basis with very significant reductions.

It is a more difficult process to go directly to the source of the product, but it is also a very productive and worthwhile process, which the Air Force is pursuing very aggressively.

Senator PROXMIRE. Nevertheless, you had these high prices. The SBA argued with the Air Force, pleaded with them and asked if they could submit—request competitive bids. They did. The result was you obtained a reduction of about 95 percent in the case of these.

Mr. CARVER. Mr. Vice Chairman, I already indicated I am not familiar with those specific products. I am familiar with others where we followed the same process.

I guess what I am doing is agreeing with you that there are in fact better ways to buy products, and the Air Force has been seeking them out.

I am a small businessman who has never done business with the Air Force or the Federal Government, but I clearly understand what competition is all about. I can assure you I believe in it, it is the right way to do business.

I might add, Ernie's book, which he showed me—and an area that we want to take a look at—sometimes the cost of small business sourcing can be extremely expensive and causes us to spend literally thousands and thousands of dollars that maybe we shouldn't spend. But there are two sides to each coin, and in this case going to the original source for product often saves us a great deal of money. And I take your word for it, we have apparently saved a lot of money there, too.

I would like to hope that Air Force members are the ones that devised the methods to get the prices reduced, but I don't know that to be a fact.

Senator PROXMIRE. Let me ask you, Mr. Fitzgerald, how do you react to the dramatic price cuts that occurred under competition?

And, by the way, in each case a company other than Boeing won the contracts.

Mr. FITZGERALD. I am, of course, delighted that that happened. I think the specific answer to the question you raised, how did it happen in the first place, is probably that our contracting officers were following the rules as they are laid down and which result in their really not buying those items. They buy the contractor's costs in negotiated situations. They buy these markups such as you have on your chart, and the savings come from getting those parts out from under those huge markups.

You know, I am hopeful that we can continue to do more of that, but at the same time say "no" to the big markups so that you can get multibillion-dollar savings.

Senator PROXMIRE. Mr. Fitzgerald, in your letter of August 16 you say: "Unfortunately, we have a real rebellion on our hands amongst the military procurement people regarding work measurement and use of standard hour statistics."

You then say: "As my former boss put it—a 'Blue Curtain' has descended about the subject."

Can you explain what you mean by a rebellion among the military procurement people?

Mr. Fitzgerald. Yes. I alluded to that earlier.

The military staff and the Air Force Systems Command, in particular, has simply defied the guidance and direction that has been issued from my office. I don't know whether they have support in doing that or not.

Just this last, around the 1st of May, the Air Force Systems Command management started a public relations campaign, seeking to change fundamentally the approach that we have been employing or trying to employ since January 1966 in this area. It has been almost impossible for me personally to get information on what they are up to. We have been trying our best, and Mr. Carver and I met with Secretary Orr in an attempt to do this in July of this year, but we have had very little success. They are quite testy about it, and General Skantze in particular has made a number of public statements decrying the congressional interest, in particular.

Mr. Carver. Mr. Vice Chairman, I would like to expand on that if I could.

First, you have a copy of the amendment to the regulations which says, in effect, that virtually every item of information concerning work measurements will flow through our office. I already indicated to you that Ernie will have the principal responsibility in that area, but I would like to add to it that I had a conversation with General Skantze yesterday about this particular amendment. I would say that he supported it just as he supports the development within the Defense Department of work measurement throughout the three services.

Then I would like to add one other thing. I visited our Contract Management Division at the Air Force Systems Command, commanded by Maj. Gen. Bernard Weiss in Albuquerque, NM, just 2 weeks ago. I spoke with the people who work for him. I would say that they share Ernie Fitzgerald's enthusiasm for work measurement, and they see it as an early warning signal just as you have indicated and Mr. Fitzgerald has indicated, and they are also very enthused about expanding its implementation.

Senator Proxmire. Let me just interrupt because I think you want to answer to the question with something else in mind. General Skantze has been very, very critical of standard labor hours for the defense and civilian manufacturing industries. He doesn't like it at all. He is quoted in Defense Week as saying that the House bill requiring the Pentagon to draft regular comparisons of standard labor hours in the defense and civilian manufacturing industries would be "an enormous club with which we will be beaten."

Were you aware of this statement? Have you discussed it with him?

Mr. Carver. No, sir.

Senator Proxmire. What do you think he means?

Mr. Carver. I think General Skantze means, based on previous conversations with him—and I might add with General Weiss, who works for General Skantze and is the active person in charge of implementing the MIL STD in many cases—is that they would rather manage Military Standard 1567A work measurement within the

Air Force rather than having it managed from the Congress, and I think that is what he intended.

Whether that is right or wrong, Mr. Vice Chairman, is a question only he can respond to. But it is my feeling that that particular statement, although I have not discussed it with him personally—I have read considerable statements by General Skantze, and I think the issue of micromanagement was really where he was coming from.

Senator PROXMIRE. Mr. Carver, it is not a matter of power. It is a matter of policy. What we are talking about is standard measurement. What we are talking about is something that Mr. Fitzgerald has been fighting for for virtually all of his career, and you are saying—you told me a little earlier—that General Skantze supports the idea. But now he says it is "an enormous club with which we will be beaten."

Mr. CARVER. Mr. Vice Chairman, I would repeat one more time, again I can't speak specifically for General Skantze except through my conversations, which did not address that specific statement. It is my personal feeling that General Skantze was talking about having outside forces hammering over the head in the implementation of work measurement.

But as a practical matter, for Military Standard 1567A, which is work measurement within the Defense Department, in my judgment it is something that General Skantze supports. I might add, it is something that I support, and, more importantly, Secretary Orr is convinced that it must be used, and as is indicated in my prepared statement, it is something that will be issued.

Senator PROXMIRE. When you pay so much more for this little screw and this little plate, somebody has to hammer somebody over the head to get some changes.

Mr. Fitzgerald, I would like you to comment on this.

Mr. FITZGERALD. Yes. I quite agree. I think that General Skantze as well as the other military procurement community people fear public disclosure. This is the public's money. It is the taxpayers' money.

General Skantze has issued formal position papers changing the whole nature and meaning of work measurement. He is trying to shift definitions so that normal performance becomes an ultimate goal. He is in effect saying to our suppliers that they will expect that the Air Force Systems Command does not expect the suppliers to work at a normal pace and to keep foreign elements—waste, fraud, abuse if you will—down to a bare minimum. He is also seeking to push downstream the effective date of applying these measures.

We have been very successful in recent months——Dr. Amlie in particular—in applying these measures to projects still in development. General Skantze's command wants to push it down to the second production order.

You know, I just think that is very destructive to what we are trying to do in our attempts to save money. General Skantze is not being constrained in those efforts, and as I say, I don't know whether Secretary Orr is unwilling or unable to restrain General Skantze. I just can't say. I wish I knew.

Mr. **Carver**. Mr. Vice Chairman, I don't want to walk out of this room with this question left in the air when I myself sat in the room with the people in charge of implementing work measurement in Albuquerque, NM, within the Systems Command, who indicated to me that they are committed to institute work measurement, not just in production but in the developmental phase as well. They are willing and want to institute it because they believe it.

Now, they work for General Skantze. It may be that General Skantze is saying one thing and they are hearing another, but the people in the field who are implementing it are committed to doing it.

And as I have already pointed out and would point out again, I have Secretary Orr's support in being sure that it is done correctly, and that is today a part of the regulations of the U.S. Air Force.

Mr. **Fitzgerald**. I agree with Mr. Carver. Most of the people we work with in the field agree with us, but the fact is General Skantze does not and the other high-ranking officers in the procurement community don't either, at least for the record.

So that is our problem right now—is the ability or willingness of our office to control military staff.

Senator **Proxmire**. Mr. Carver, the testimony states that the high markups that are builty into the pricing policy—we were talking about this screw that costs 20 times more than it should. We were talking about ashtrays which cost $600, toilet seats, and so forth.

Doesn't all this demonstrate that high-price markups are a systemic problem, that they exist in all areas of Air Force-negotiated procurement?

Mr. **Carver**. Those particular reductions in price, I would stake my life occurred because we stopped buying from prime contractors. Through breakout, the system that we are using and have institutionalized within the Air Force, we are now buying from the actual manufacturers themselves. That is how you eliminate those particular costs.

Any of us, when we go out to buy spare parts for oure cars, discovered years ago that there are many auto parts dealers that are not a part of the organization of manufacturers who sell them a great deal cheaper.

That is what the Air Force is trying to achieve. I think in this particular case, related to those spare parts, this is the process that will reduce the price.

Now, on the other hand, a totally separate issue is in fact the markup on the assembled product by the prime contractor. It is clear to me—that is why we have a project underway in this particular area—that we have to have a very effective means of quantifying costs in order for us to reduce costs. And in addition to that we have to introduce more competition.

And the Air Force was the first to institute the competition advocacy program. I would suggest that that is the real test, whether the Air Force believes in competition.

All of us would like to go back and relive our lives. If we did so, I suspect we would change a great deal. I don't think the Air Force is any exception, but I think it ought to be judged by where they are going and how hard they are working on these particular efforts because one thing that I would never share in terms of an opinion with anyone is that there is any member of the Air Force management who isn't first committed to the defense of this country, which means as much as anything can mean that we have to use our resources efficiently.

Senator PROXMIRE. We certainly all agree wholeheartedly with that, but when you take a look at what has happened to the price of fighter planes, for example—they have gone up two hundredfold, not 200 percent but two hundredfold since World War II—and you get the statements of the vice president of North American Aviation, who has made a projection about the year 2054, the entire defense budget will buy one plane. It will be a beauty, but only one plane—and because of the ridiculous policies that we follow with respect to the defense contractors.

Mr. Fitzgerald, I want to ask you. Some experts argue that the high-price markups on spare parts are a fluke resulting from the way overhead is allocated by defense contractors.

Can you summarize and comment on that explanation?

Mr. FITZGERALD. Yes. There was a disinformation campaign that was current early this year that the equal allocation of overhead rather than allocation as we have shown on your chart there was the cause of these apparently excessive costs and that it was an anomaly rather than a systematic problem.

We found that program was a complete hoax. The equal allocation of overhead accounting system that was originated in the procurement community, which was laundered through Professor Kelman at Harvard and George Will, the columnist, had no basis in fact whatsoever. It just isn't true. It never happened.

The procurement folks in the Department of Defense with some fanfare outlawed the practice, which was quite easy to do because it never existed.

Senator PROXMIRE. May I ask you this, Mr. Fitzgerald? General Skantze maintains that all of the cases of high-price markups that have been uncovered when added together do not amount to very much and that this is something of a red herring.

How do you react to that? How much do you estimate is involved in excessive price markups?

Mr. FITZGERALD. I react that General Skantze is wrong. The excessive markups such as we have discussed here this morning amount to a great deal.

I believe I testified last year that in my own experience in applying cost analyses we were able to take out 30 percent of requested price increases. That was when prices were much lower than they are now and markups were much lower.

The dollars per standard hour figures that I testified to in 1973 before your subcommittee ranged from $19 to $195, most of them grouped around $30 or $40. Today, 12 years later, that same range runs from $99 to over $30,000. So there is no escaping the fact that we have enormous fat across the board, not just individual spare parts.

Senator PROXMIRE. Finally, Mr. Fitzgerald, some defense officials argue that the Defense Department has uncovered the horror stories of price markups that have received public attention and, second, that these high prices were caught in time so they were not actually paid.

How do you respond to that?

Mr. FITZGERALD. I agree that most of the horror stories were uncovered by Department of Defense employees. The question is what happended to those employees who found them.

There is a wry saying around the Pentagon: "One of our guys found it; we are about to find him." [Laughter.] We have a saying around the office that "We spend a lot of our time trying to keep the cannibals from eating our missionaries."

We find that really tough cost cutters, like industrial engineer Ompal Chauhan, are in constant hot water because they embarrass their fellow bureaucrats by their findings.

We have seen the example of George Stanton, the auditor at Pratt & Whitney, who was very helpful to us in this in the early days of the driving and successive markups. Gone from the Government, and no one is seeking to emulate him.

The rewards and punishment system is upside down generally. That is the problem.

Senator PROXMIRE. Mr. Carver, would you like to make a final statement in summary?

Mr. CARVER. I would like to make one point.

Secretary Orr would like to see us reduce costs across the board. I think we are committed to getting that job accomplished. I think we have the tools with which to get it done. It is our intent and my intent to be successful, and I think we will be, and I have no question in my mind that the Air Force leadership wants to see that occur.

Change is a traumatic thing for anyone. So as a result sometimes many people fight change because they simply don't like to see it take place. But there is no question or doubt in my mind that where change is required it will be accomplished.

A great deal of change has taken place in the last 3 or 4 years. There will be more in the future.

One thing, though, that I think is important to stress is none of us has the luxury of being an editor, sitting up on a stool playing the role of critic. All of us have to be involved in the solution, and I personally believe that the Air Force leadership from Secretary Orr down is committed to that objective.

Otherwise, we wouldn't have devised competition advocacy. We wouldn't have devised breakout to reduce the very prices on the parts you have described. We wouldn't have devised the system of zero pricing so that we can find and change these high-priced stores and get them down to low-priced stores.

And there are many people who have to come back and criticize because of those who do not want change to take place. I can assure you that change is the word in the Pentagon and it is specifically directed at reducing the cost of doing business, particularly in our acquisitions, to that irreducible minimum and then reducing it again.

Senator PROXMIRE. Thank you, sir. I have a closing statement I would like to make.

The saga of Ernie Fitzgerald continues. It is the longest running TV soap opera. It would be even better entertainment if it weren't so serious.

The real life drama concerns the career, not only of one of our most outstanding civil servants, but also the taxpayers and the real strength of our national defense. Mr. Fitzgerald's story is symbolic.

In 1967, he was the Air Force nominee for outstanding Pentagon employee. In 1968, he told the truth about the colossal overruns. He admitted the truth before this committee about the overrun in the C–5A. One year later the Air Force tried to fire him. He has been battling since then with one hand against waste and mismanagement and with the other against Pentagon officials who resent his efforts and are undermining him.

Recent events show that the Pentagon has returned full circle. After losing in the Federal courts, it appears once again to be cracking down on those who are trying to eliminate waste instead of on the waste itself. The entire effort to reform defense contracting has been experiencing similar treatment from the Pentagon.

First, the existence of waste is denied.

Second, when unmistakable, overwhelming evidence of waste is uncovered, the Pentagon tries to take credit for disclosing it and claims to be taking steps to correct the problem. At the same time it attacks those who have done most to expose the waste, sometimes at great cost to their careers if they happen to be Pentagon employees. It also attacks those in Congress and the press who criticize defense waste.

Mr. Carver has just said that change must take place, and we all agree with that. But it is awfully discouraging, Mr. Carver. The more things change, the more they stay the same in the world of defense contracting.

We have been holding hearings on this since the 1960's. In the 1960's we were told change is going to take place pretty much along the same line that we are hearing this morning.

The good news is that the public has become aroused and is clamoring to end defense waste.

So I do come away hopeful we will get reform despite the depressing sameness and monotony of the attitudes of top Pentagon officials.

I want to thank you gentlemen for appearing. You have been most responsive, and I deeply appreciate it.

The subcommittee stands adjourned.

[Whereupon, at 12:15 p.m., the subcommittee adjourned, subject to the call of the Chair.]

DEFENSE ECONOMICS ISSUES

MONDAY, DECEMBER 16, 1985

Congress of the United States, Subcommittee on Economic Resources, Competitiveness, and Security Economics of the Joint Economic Committee,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room SD-628, Dirksen Senate Office Building, Hon. William Proxmire (vice chairman of the subcommittee) presiding.

Present: Senator Proxmire.

Also present: Richard F Kaufman, general counsel.

OPENING STATEMENT OF SENATOR PROXMIRE, VICE CHAIRMAN

Senator **Proxmire**. The subcommittee will come to order.

On September 6 of this year, we heard testimony from Ernest Fitzgerald about problems in defense contracting. Among other things, Mr. Fitzgerald said the military establishment in the Air Force had defied guidance from his office about the use of management techniques to drive down the cost of defense contracts. These techniques are known as the should-cost approach to analyzing contract proposals and performances.

Mr. Fitzgerald asserted that a blue curtain had descended around Air Force contract facilities, making it difficult, if not impossible to obtain information about contract negotiations and contract performance.

He also alleged that Gen. Lawrence Skantze, Commander of the Air Force Systems Command, had changed the definitions of certain management terms, such as work measurement, to the detriment of the goals of cost control. According to Mr. Fitzgerald, General Skantze is telling the contractors that the Air Force does not expect them to work at a normal pace and to keep waste, fraud, and abuse down to a bare minimum.

These are serious charges, and General Skantze, quite properly, wrote me afterward refuting a number of the statements made on September 6, suggesting that he be invited to testify at a future hearing.

Today's proceeding is intended to permit General Skantze to respond to criticism and tell his side of the story.

Now, how about this should-cost analysis? Is it worthwhile, and could it save the Defense Department and the American taxpayer money?

The Defense Department's own Inspector General, Joseph Sherrick, has just completed a detailed study of 17 major defense contracts. What was his conclusion?

He concluded that should-cost economies could over a 5-year period save $7 billion.

The Inspector General's audit, released within the last few days, found that the military buyers routinely neglect to conduct should-cost estimates, even though those estimates are required by Defense Department regulations.

Let me repeat that. The Defense Department was found by its own Inspector General to have ignored its own regulations that require should-cost estimates to be applied.

And this Senator, I might say, spent 5 years in the military in World War II, and the one clear and simple principle I learned is that military personnel must follow orders, like it or not, wise or stupid. Military orders—it is an order, and you obey it.

Apparently, this is not true in Department regulations, and why? One reason given is that should cost is not as effective at holding down costs as competition.

What about sole-source procurement? What does sole-source mean?

It means procurement from one contractor without competition. How about that?

Well, the Pentagon Inspector General found that some of the largest sole-source contractors have never been subject to should-cost scrutiny. That is right, never. These included General Dynamics' F-16 fighter, the RCA military weather satellite, McDonnell-Douglas' F-18 fighter, an attack plane, Lockheed's P-3 surveillance plane, and Texas Instruments' HARM missile.

As might be expected, the services have not taken this recommendation by the Defense Department's own Inspector General lying down.

The Navy argued that there are other ways to hold down costs, like competition and fixed-price contracts. They asked that the services be given the flexibility to apply should cost when they want to apply it.

Assistant Navy Secretary Pyatt pleaded the Navy case. Pyatt also disagreed with the $7 billion estimate.

With all due respect to Mr. Pyatt, it seems to this Senator that we should certainly apply should cost to every procurement wherever competition is not open and involving a sufficient number of vendors so that it may be made strictly and completely on the basis of the lower cost bidder and fully meet the specifications.

This Senator construes that IGA report as a vindication of Mr. Fitzgerald and his long, lonely, thankless struggle to obtain policies that would reduce the cost of military procurement as much as possible.

General Skantze, we are honored and pleased to have you here. Go right ahead, sir.

Before you gentlemen testify, I would like both of you to respond to swearing in so that we have this as a matter of oath.

[Witnesses sworn.]

TESTIMONY OF GEN. LAWRENCE A. SKANTZE, COMMANDER, AIR FORCE SYSTEMS COMMAND, U.S. AIR FORCE

General SKANTZE. Thank you for inviting me to participate in these hearings, Senator. I welcome the opportunity to testify about cost effective implementation and the discipline of work measurement systems within the Air Force.

As Commander of Air Force Systems Command, I am the chief acquisition agent for the Air Force. I am ultimately responsible for cost effective acquisition of qualitatively superior supportable aerospace systems and equipment within the Air Force.

In fiscal year 1985, my budget to execute this responsibility was over $32 billion, $20.5 billion in production and $11.6 billion in RDT&E.

I am not an industrial engineer, but I am a program manager who understands and appreciates the fundamental concepts on which an effective work measurement system should be based.

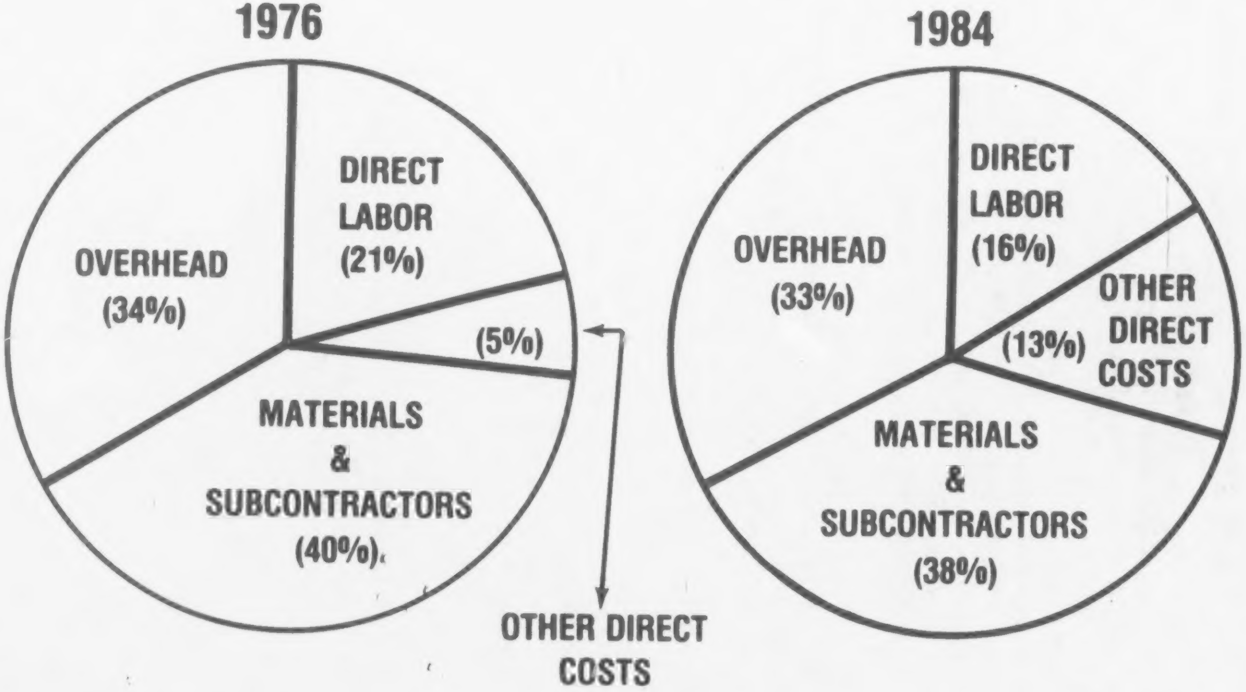
In the DOD we have adopted Military Standard 1567A as the primary vehicle to require our contractors to develop and use work measurement principles to improve manufacturing labor performance.

Please remember, work measurement is a tool to impact direct manufacturing labor. It does not attempt to address the other legitimate costs necessary to develop and deploy a complex weapon system. Other tools are required to attack costs such as materiel, engineering, facilities, management, or supervision.

As you will note on the first chart to your left—to your right, I should say—it illustrates how direct labor, of which manufacturing labor is the major part, is declining because of increasing automation. The data are a composite of all contracts administered by the Air Force Contract Management Division.

[The chart referred to follows:]

DIRECT LABOR — — DECLINING OVER TIME



General SKANTZE. Between 1976 and 1984, direct labor costs declined from 21 percent to 16 percent of all costs. This represents a 24 percent decline. Direct labor costs, of course, are still significant and worthy of continued management attention.

Within the DOD, work measurement had its genesis in a series of studies by Air Force Systems Command in the 1970's.

The Lyon study in 1971, the Sagamore study in 1972, and Project ACE, the Acquisition Cost Evaluation Project, in 1973 led us to conclude that an increased emphasis on production management was necessary to improve labor force productivity.

As a result, therefore, Systems Command invented Military Standard 1567 as the USAF standard in 1975.

From 1977 to 1983, we led the fight to persuade the other services to join us in our commitment.

Finally, in March 1983 the battle was won, and Military Standard 1567A, the DOD version, was issued.

Military Standard 1567A is not a detailed "how to" manual that specifies each of the literally thousands of individual elements which collectively comprise a work measurement system. Military Standard 1567A is a performance based document that provides broad criteria which, if properly followed, will lead to a disciplined work measurement system emphasizing manufacturing performance improvement.

But work measurement is just one component of an integrrated Air Force Systems Command initiative to improve defense contractor productivity and to reduce costs. Other components to that initiative include manufacturing technology programs, the industrial modernization incentives program, producibility engineering and planning, and reliability and maintainability improvement.

To make sure these individual thrusts are truly integrated, I have created an organization within AFSC Headquarters with the necessary manpower and muscle to work the issues.

My Deputy Chief of Staff for Product Assurance and Acquisition Logistics is responsible to ensure that the systems we acquire are reliable, supportable, and cost effective. I can assure you, however, that within that context work measurement has our undivided attention.

In 1980, the General Accounting Office estimated that widespread application of Military Standard 1567A could result in an overall 5 percent reduction in major weapons systems acquisition costs. Military Standard 1567A focuses on direct manufacturing labor, typically only about 10 to 20 percent of the prime contractor costs.

The General Accounting Office study estimated that an aggressive, effective work measurement system could increase direct manufacturing labor productivity by 10 to 20 percent, but that estimate assumed the contractor under consideration initially had no work measurement system at all.

Mostly Air Force Systems Command contractors already have functioning work measurement systems. These systems are not as effective as they could be, and significant improvement is certainly possible, but probably not the overall 5 percent improvement estimated by the GAO.

In any event, both I and Air Force Systems Command are committed to contractually applying work measurement requirements widely and consistently.

Personally, I have been committed to work measurement since I was the program manager for the Short Range Attack Missile in 1971, when in the negotiation for the first major buy I found we had a substantial number of differences on specific labor activities.

Because we didn't have known data with which to evaluate what was fair and reasonable, that was a difficult negotiation, and I never forgot that, and I think that work measurement is important to provide those kinds of indexes to get efficient manufacturing.

In August 1984, I reaffirmed that we would use labor standards to help price, negotiate, and manage our contracts.

In October 1984, I required my program managers and Air Force plant representatives to regularly advise me of their progress in improving manufacturing productivity.

In January 1985, I persuaded the Joint Logistics Commanders to pursue an integrated policy of broad, a consistent, contractual application of Military Standard 1567A.

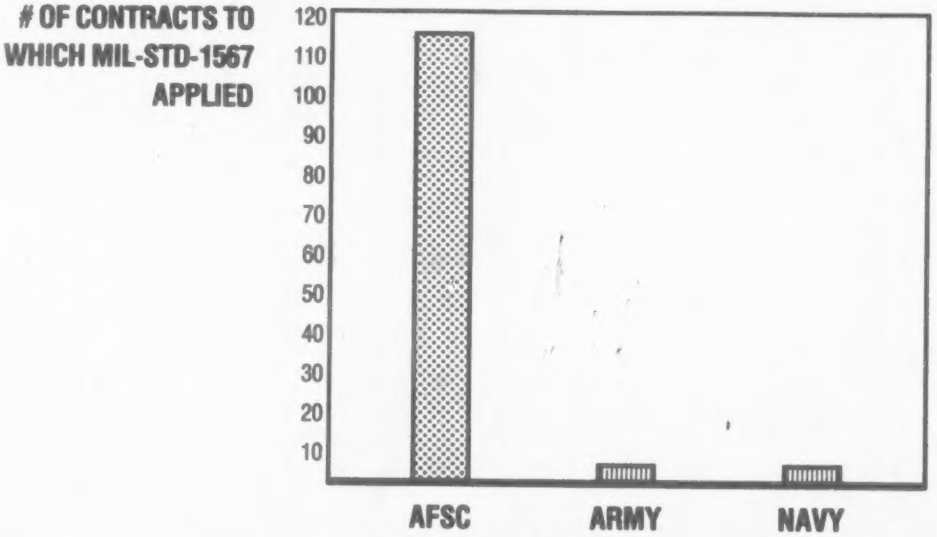
This agreement is making the difference at McDonnell Aircraft's Sikorsky Helicopter and the Allison Gas Turbine Division. In these plants, Army, Navy, and Air Force representatives are united in negotiating factorywide Military Standard 1567A compliant work measurement systems.

But actions speak louder than words.

As you can see from this next chart, Air Force Systems Command clearly leads the DOD in applying Military Standard 1567A to defense contracts. One reason we lead is that we have been working the issue since 1975 when Military Standard 1567 USAF was issued.

[The chart referred to follows:]

CONTRACTUAL APPLICATION STATUS



"General Lawrence A. Skantze ... clearly endorses and encourages the implementation of effective contractor work measurement systems. The AFSC recognizes the utility of labor standards in establishing a basis for pricing and negotiations and, most importantly, to baseline contractor performance."

Senator Charles E. Grassley
(Defense Industry Efficiency, The Case for Work Measurement)

General **Skantze**. The Army and Navy have only recently recognized the potential of work measurement.

I would like to point out that those 116 Air Force Systems Command contracts, to which we have applied the work measurement military standard, represent 75 percent of all open AFSC contracts meeting the military standard application criteria.

Not shown on this chart, but representative of my personal commitment and emphasis, is the fact that 91 percent of the dollar value of fiscal year 1985 AFSC contracts meeting the application criteria, contracts let after I assumed command, include Military Standard 1567A.

I would like to point out, Mr. Vice Chairman, that Senator Grassley also recognizes my commitment is genuine.

> General Lawrence A. Skantze * * * clearly endorses and encourages the implementation of effective contractor work measurement systems. The Air Force Systems Command recognizes the utility of labor standards in establishing a basis for pricing and negotiating and, most importantly, to baseline contractor performance.

Now, you may ask, if I support work measurement why have I been expressing concern about pending legislation on the issue?

My concerns certainly are not related to the value of applying work measurement to defense contracts. Rather, I am concerned about the qualification of those people outside of the Air Force Systems Command who will interpret the data and use it for certain reasons that are useful to them.

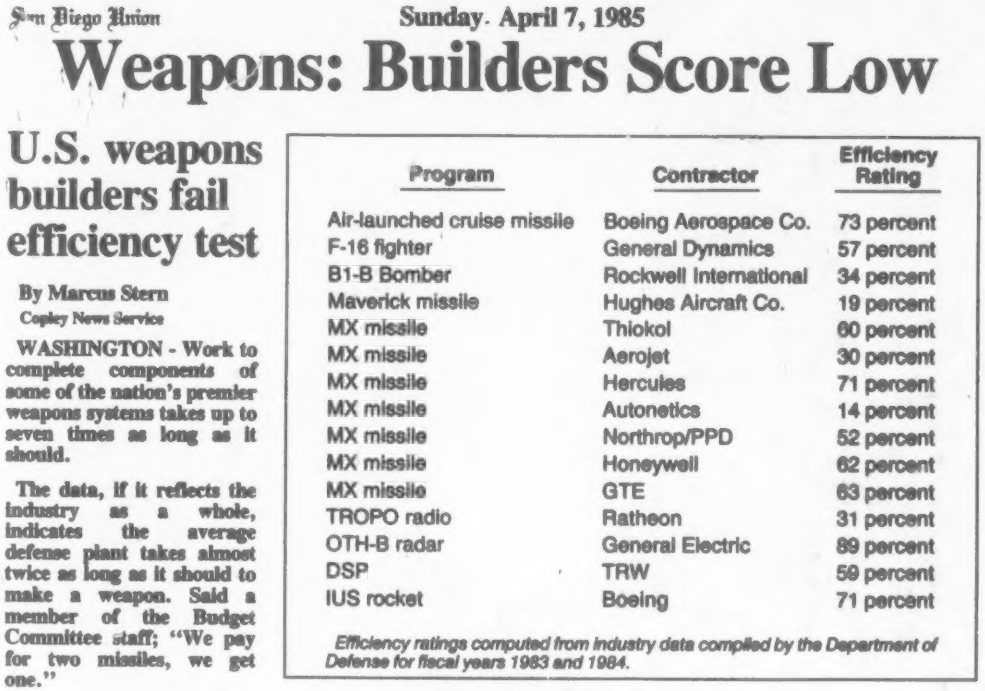
Senator **Proxmire**. General, could we get a copy of the prepared statement you are reading from because the prepared statement I have here is generally not the same one?

General **Skantze**. I am reading the same data, Senator. I have added the charts to them.

Senator **Proxmire**. All right. Go ahead.

General **Skantze**. This is what happened to the raw measurement data we previously supplied to Congress as the chart shows. The data did not indicate that work takes up to seven times as long as it should.

[The chart referred to follows:]



San Diego Union Sunday. April 7, 1985

Weapons: Builders Score Low

U.S. weapons builders fail efficiency test

By Marcus Stern
Copley News Service

WASHINGTON - Work to complete components of some of the nation's premier weapons systems takes up to seven times as long as it should.

The data, if it reflects the industry as a whole, indicates the average defense plant takes almost twice as long as it should to make a weapon. Said a member of the Budget Committee staff; "We pay for two missiles, we get one."

Program	Contractor	Efficiency Rating
Air-launched cruise missile	Boeing Aerospace Co.	73 percent
F-16 fighter	General Dynamics	57 percent
B1-B Bomber	Rockwell International	34 percent
Maverick missile	Hughes Aircraft Co.	19 percent
MX missile	Thiokol	60 percent
MX missile	Aerojet	30 percent
MX missile	Hercules	71 percent
MX missile	Autonetics	14 percent
MX missile	Northrop/PPD	52 percent
MX missile	Honeywell	62 percent
MX missile	GTE	63 percent
TROPO radio	Ratheon	31 percent
OTH-B radar	General Electric	89 percent
DSP	TRW	59 percent
IUS rocket	Boeing	71 percent

Efficiency ratings computed from industry data compiled by the Department of Defense for fiscal years 1983 and 1984.

FACTS

1. DATA ADDRESSES ONLY DIRECT MANUFACTURING LABOR.
2. DIRECT MANUFACTURING LABOR ACCOUNTS FOR ONLY 10-20% OF PRIME CONTRACTOR COSTS.
3. MOST PROGRAMS WERE IN DEVELOPMENT OR EARLY PRODUCTION.
4. DATA NOT INCONSISTENT WITH "COMPARABLE" COMMERCIAL PROGRAMS.

General **Skantze**. Additionally, despite the assertion of the unnamed committee staffer, the data did not indicate that we pay for two missiles and we get one.

The data addressed only direct manufacturing labor. Direct manufacturing labor comprises only a small percentage of the systems costs.

As I will demonstrate later, we did not expect the 100 percent factory efficiency, particularly when most of the systems were in early stages of production or still in development. In development especially, we are learning how we will produce the system.

The red dots on those programs indicate programs still in development, and the blue ones were early production.

Finally, that performance was not so inconsistent, again as I will demonstrate later, with real data from comparable commercial programs.

And that is the club I was quoted as being concerned about. It is true that a labor standard theoretically represents the time a particular task should take. However, the contractor industrial engineer, who developed that labor standard did so assuming a mature, stable production environment.

A mature, stable production environment means that normal startup problems have been eliminated, that required manufacturing processes have been stablized, and work is flowing smoothly.

In most cases, precise engineered labor standards are not even developed until methods and processes have been stabilized. Estimated standards are usually used during development.

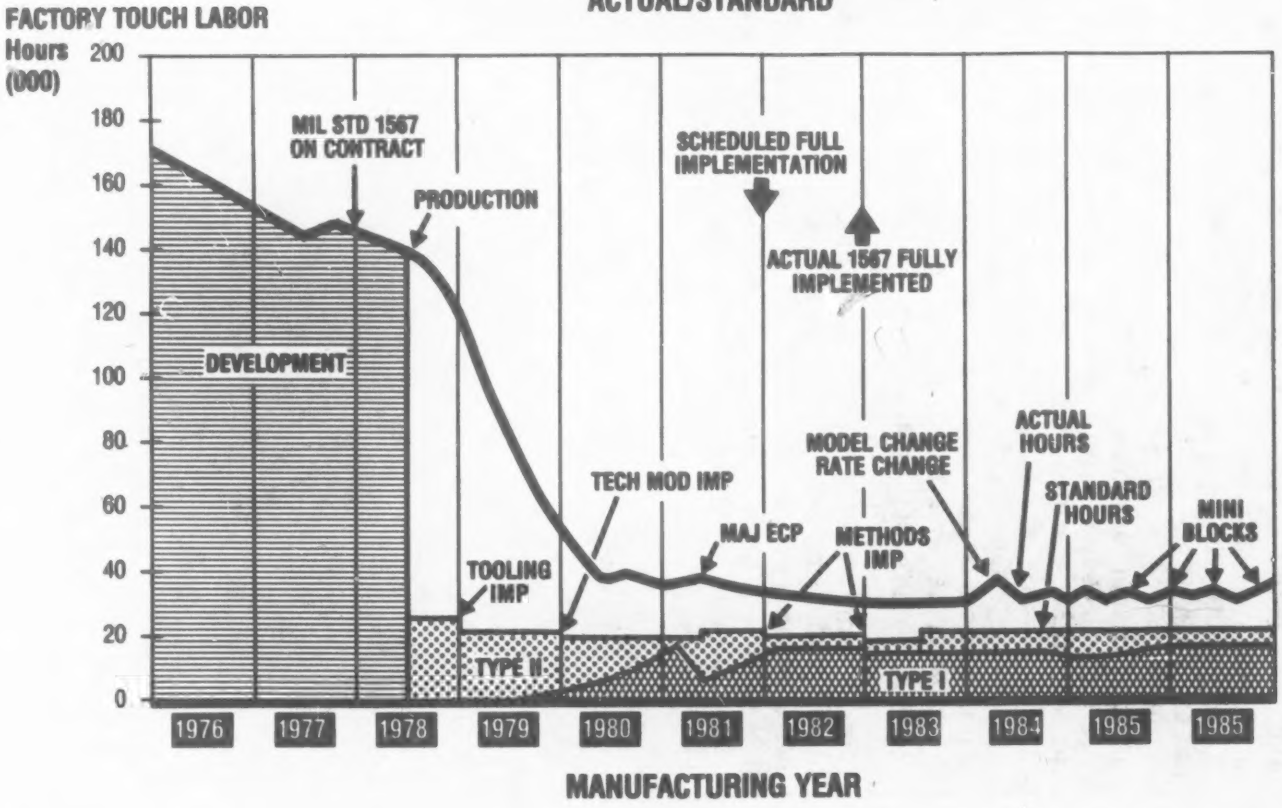
Now, let's look at a real life example of how these theories translate into practice.

This chart describes the F-16 program over time. First, note how the ratio of actual factory labor hours to standard hours declines dramatically from development in 1976, approximately 8.5 performance index or 12 percent efficiency, to theoretically mature production in 1985, approximately 2.0 performance index or 50 percent efficiency.

[The chart referred to follows:]

MANUFACTURING HOURS

ACTUAL/STANDARD



General **Skantze**. Also, note that Type I, or engineered labor standards weren't developed until production had begun, when the manufacturing processes had stabilized.

Finally, note all the changes to the design and manufacturing processes over time—tooling improvements, technology modernization, or tech mod, modernized manufacturing facilities, a major engineering change proposal in 1981, and mini blocks of minor engineering changes blocked together in 1985 and 1986 to minimize disruption, methods improvement, rate changes from 15 aircraft per month to 11 aircraft per month, and finally a major model change; in effect, a significantly different product.

All of these changes impact mature production and standard performance achievement. In effect, mature production is never achieved; the production quantities and design never really stabilized.

This is simply not the same environment in which most commercial companies operate. This chart shows just how expensive these labor standards can be. Even using the most modern computerized time systems, it takes an industrial engineer 2 to 15 hours to develop one manufacturing standard labor hour.

[The chart referred to follows:]

LABOR STANDARD DEVELOPMENT TECHNIQUES

LABOR STANDARD METHOD	IND ENGR HOURS TO DEVELOP ONE STD LABOR HOUR
1. PREDETERMINED TIME SYSTEMS	
A. COMPUTERIZED	2 TO 15
B. SIMPLIFIED MANUAL	10 TO 100
2. TIME STUDY	50 TO 200
3. WORK SAMPLING	15 TO 30

DATA PROVIDED BY METHODS/TIME MEASUREMENT (MTM) ASSOCIATION AND H.B. MAYNARD COMPANY

General SKANTZE. Please note that what this chart does not show is the cost of the computer systems. Manual systems obviously would not require similar upfront investments. Therefore, based on their unique requirements, separate contractors may make different decisions on the cost effectiveness of requiring such computerized systems.

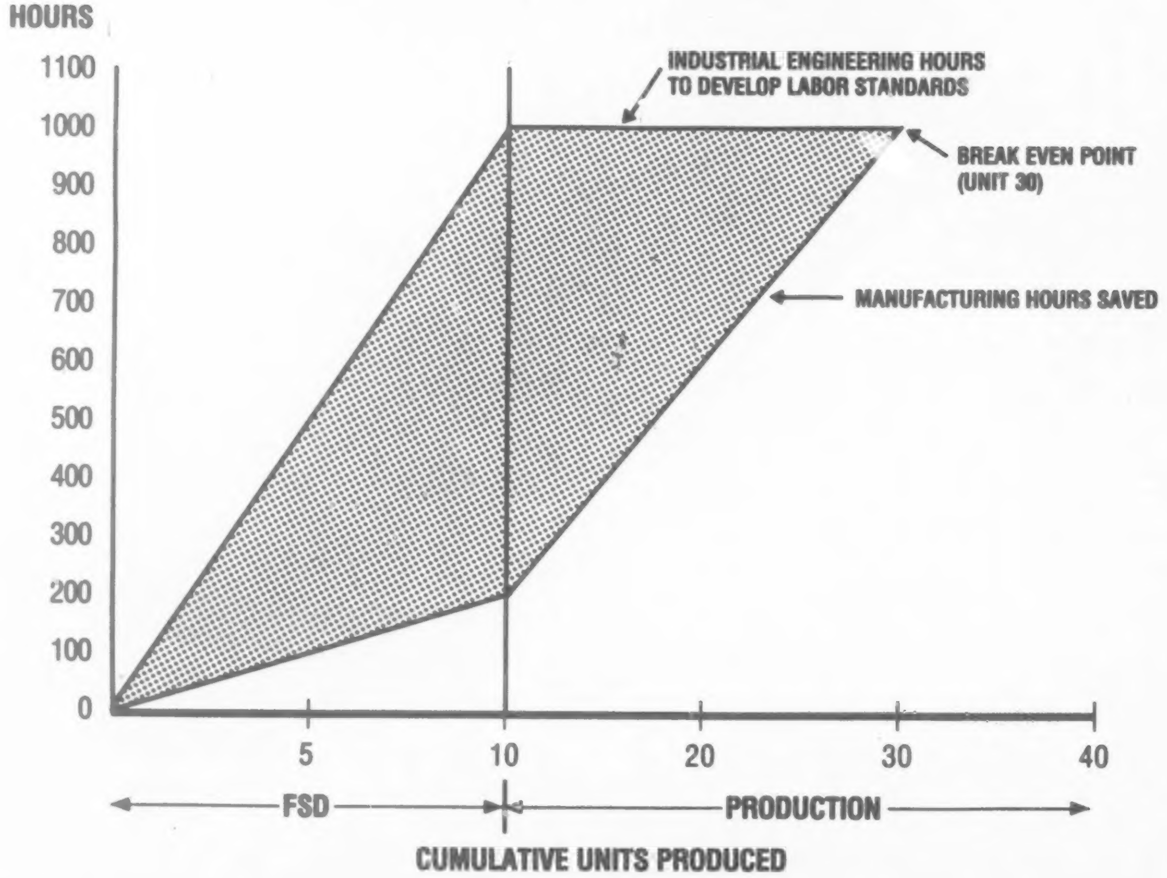
Remember that GAO estimated we could save from 10 to 30 percent of the direct manufacturing labor, not the 60 or 80 percent some would have you believe. So if we have only one unit to buy, we can spend 2 to 15 industrial engineering hours to save 10 to 30 percent of 1 manufacturing labor hour. Probably not a good decision.

The chart also demonstrates why we don't like to set an engineered labor standard before the process is stabilized. We don't want to keep paying for an engineered standard over and over again.

This chart graphically illustrates the fact that work measurement concepts were originally developed for noncomplex, high volume products. We've adopted the concept for our complex, relatively low volume systems, but it's not always a good fit.

[The chart referred to follows:]

COST/BENEFIT CONSIDERATIONS



General **Skantze**. For this simple illustration we make several assumptions. We're developing the labor standards, using a computerized technique that requires about 10 industrial engineering hours to develop each labor standard hour. We'll achieve 20 percent improvement, once we have the system in place and 10 percent while we're bringing the system up. This is a relatively simple product. It only takes about 200 manufacturing labor hours to build, and we're building a lot of it.

We began to develop the labor standards during the 10 lot full-scale development program and all 100 standard hours were developed by the time we got to production. Using the assumed 10 to 1 ratio of engineering industrial hours to manufacturing hours, it took 1,000 industrial engineering hours to develop the 100 standard labor hours.

The yellow area represents the deficit between industrial engineering hours expended and the cumulative manufacturing hours saved. You can see we don't break even in this example until Unit 30. This chart demonstrates why inflexible implementation of work measurement is not always smart.

This is not to say that low-volume programs such as satellites cannot benefit from work measurement. They can and they do. But the principles must be applied carefully with full understanding of all the potential impacts. Sometimes requirements must be modified. For satellites especially, we may choose to continue to use estimated standards for nonrepetitive assembly processes.

Now, I'd like to turn to another issue that must be made clear, the issue of operator efficiency versus factory or shop efficiency. There is a significant difference, one that is not too often understood. Work measurement has traditionally been used as a tool to evaluate the efficiency of individual workers performing relatively simple repetitive tasks. Even in the defense industry, where individual workers usually perform complex, nonrepetitive tasks, the concept still has merit; however, as we've learned time and time again, a labor force can only be as productive as management allows it to be.

Low volume complex weapons systems are clearly an environment in which management support is especially critical. Work measurement applied to major weapons systems yields a situation where the whole is greater than the sum of its parts. That is, where factory efficiency is not the average of individual operator efficiencies.

The operator can be held responsible for only a portion of the total factory or shop efficiency. His responsibility is limited primarily to learning the job, and that portion of rework, scrap, repair, and reinspection caused by such things as engineering changes or vendor problems, unmeasured work—productive work for which no labor standards have been made—or delays in awaiting parts or because of machine downtime, are the responsibility of management. Labor time standards do not, cannot, take these other unforeseen factors into account. It is these problem areas which cause those extra hours which make the whole greater than the sum of its parts.

It is the total performance measurement level that we must manage and which has been reported to Congress and publicized in the media. These management problems are present in every product we build, but they are particularly prevalent in DOD's systems for two reasons. First, because of the need to field a system quickly, to counter a very real foreign threat, systems have sometimes begun their production process while development continues.

In those cases we learned in the broadest context of the word during early production. Second, the foreign threat is not static. The enemy is constantly upgrading the capability of his systems as well. Since our ability to defend this country is predicated on technological and not numerical superiority, we must incorporate improved capabilities into our systems, even as they are produced.

These cause perturbations in the manufacturing process which impact our ability to produce the standard. In an attempt to understand similarities and differences between commercial and defense contactors, we contracted a number of nationally recognized work measurement authorities whom I've listed on the chart.

[The chart referred to follows:]

INDEPENDENT WORK MEASUREMENT AUTHORITIES

Dr. Chet Brisley (Professor Emeritus, University of Wisconsin)

"Defense Products May Not Be Expected to Reach Factory Standard - Even at Mature Production."

Dr. Irwin Lazarus (Senior Vice President, Lester B. Knight and Associates)

"To Expect 100% Factory Performance to Standard (From Either Defense or Commercial Companies) in the Early Stages of Production Is Simply Not Realistic."

Dr. France Meier (Professor of Industrial Engineering, University of Texas, Arlington)

"There's No Way You Should Expect 'Standard Performance' at the Factory Level for Early Production Units - Particularly in the Defense Environment."

Dr. Richard Shell (Professor of Industrial Engineering, University of Cincinnati)

"Although Operators Perform to Standard at Mature Production, 'Shops' Usually Never Achieve Standard."

Rajesh Soin (President, Modern Technologies Corporation)

"The Earnings and Standards in the Commercial Industries are Time Inflated and are not Directly Comparable to Standards in the Defense Industry."

- **COMMERCIAL COMPANIES DO NOT USUALLY ACHIEVE 100% FACTORY EFFICIENCY DURING EARLY PRODUCTION**
- **PRODUCTION STABILITY/MATURITY KEY TO FACTORY EFFICIENCY**
  - **DESIGN**
  - **TECHNOLOGIES**
  - **PROCESSES**
  - **PRODUCTION QUANTITIES/RATE**
- **DEFENSE SYSTEMS MAY NEVER REACH 100% FACTORY EFFICIENCY**
  - **COMPLEXITY**
  - **FREQUENT DESIGN IMPROVEMENT**
  - **LOW PRODUCTION VOLUME**

General SKANTZE. Just briefly, Dr. Brisley is past executive vice president of the Institute of Industrial Engineering, Dr. Lazarus was previously professor of industrial engineering at Purdue and also past director of the Army Management Engineering Training Activity. Dr. Meier is current director of Work Measurement and Methods Engineering Division of the Institute of Industrial Engineers. Dr. Shell is past director of the IIE's Work Measurement and Methods Engineering Division, and Mr. Soin specializes in manufacturing and quality assurance management, primarily for firms in the DOD environment.

His remarks, primarily directed toward commercial incentive contractors, are particularly interesting, because they reinforce the need to make comparisons among companies, only after careful analysis. He asserts that most incentive companies adjust the labor standards to assure the average worker can routinely achieve 125 to 130 percent operating, not factory, efficiency.

This is done to encourage the worker to earn bonus dollars by working harder than he would do without the incentive. Incentive companies believe it works. Unfortunately, however, it makes the normal nonincentive defense industry and also most commercial industries look weak in comparison. In any event, all of these experts agree that most commercial companies do not usually achieve 100 percent factory efficiency during early production.

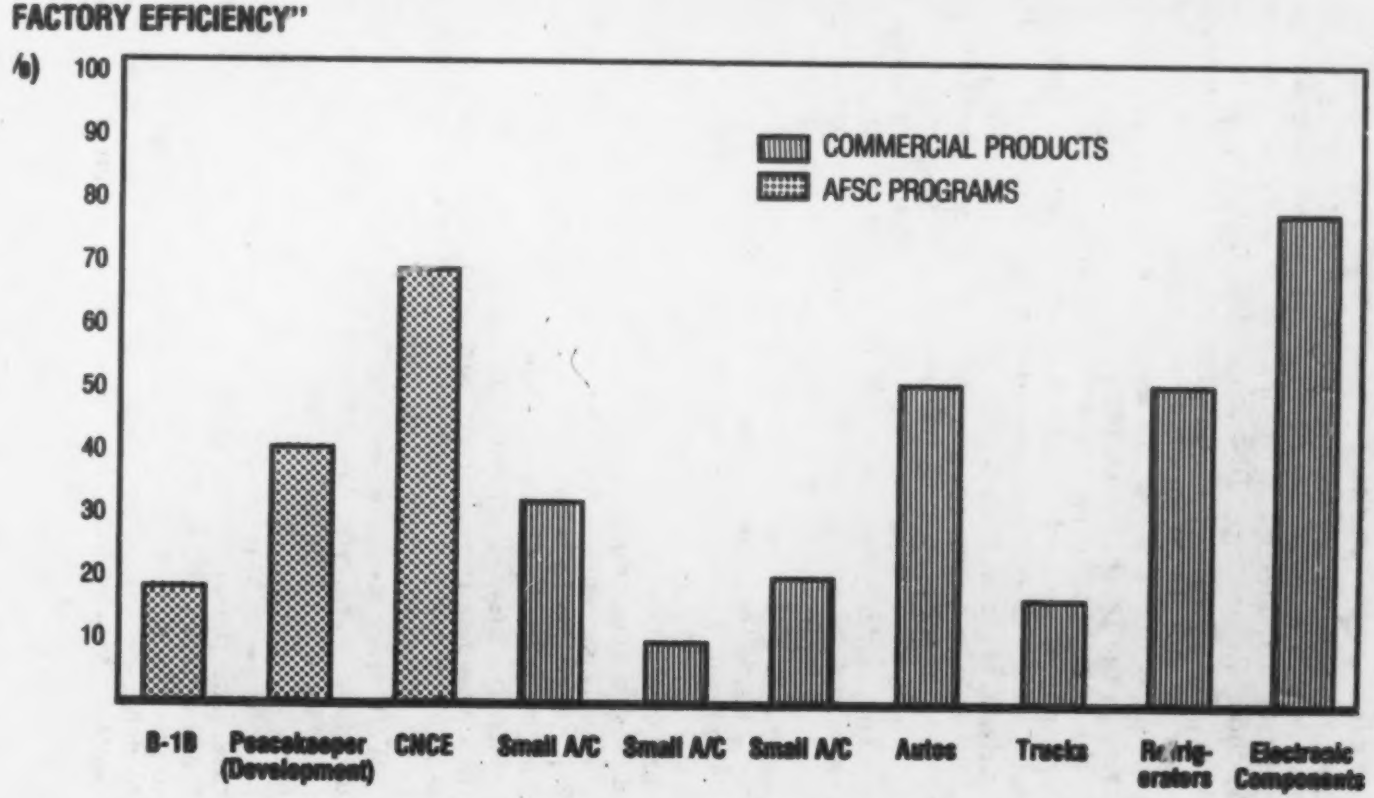
All agree that production stability and maturity are critical to achieving performance to standard at the factory level. All further agreed that production stability and maturity did not occur automatically at some specific number, whether it be 1 or 1000. Rather it is that time by which the design technologies processes and production quantities have stabilized.

Finally, they all agree that many defense systems, because of their complexity, relatively low production volume and frequent design improvements may never reach 100 percent factory efficiency.

Well, their words were interesting, but do the facts back them up? In a word, yes. We have looked at how various commercial companies perform to standard at the factory level, particularly in early production. This chart shows some preliminary results of interviews with representatives of successful commercial companies. The performances shown are—except for the Peacekeeper—for the first unit. In other words, very early production. Note the implications. Small aircraft, probably the closest product on the list to defense work, shows first unit factory efficiencies from 10 to 32 percent. Trucks were 17 percent. Even automobiles and refrigerators show only 50 percent.

[The chart referred to follows:]

"FACTORY EFFICIENCY" PERFORMANCE TO STANDARD



General **SKANTZE**. For illustrative purposes we've added three emerging defense programs, so we can compare results. Rockwell produced the first B-1B airframe at an overall factory efficiency of about 18 percent; 14 Peacekeeper contractors produced their systems while still in development. That is before the first production unit with a median factory efficiency of about 40 percent. The Communications Modal Control Element is part of a communications effort to develop and acquire tactical communications equipment. Martin Marietta has not yet completed one production unit and yet the factory efficiency was about 67 percent.

But even this supposedly comparable data are not really comparable. That's for the same reasons I discussed earlier. Complexity, production volume and rate. One measure of the complexity of a product is the standard labor hour content. The standard labor hour content of a product is the sum of all the individual labor time standards required to complete that particular item. And for most defense and commercial products the standard labor hour content confirms the differences between the two industries. One of those small commercial aircraft companies has a standard labor hour content of about 16,000 hours.

The truck has a standard labor hour content of about 11½ hours. Obviously, that factory is heavily automated.

The B-1B airframe alone has a standard labor hour content of 230,000 hours. And we're building only 100 B-1's over several years, not several thousand articles per month, as many commercial companies do. I've spent a great deal of time explaining the limitations of summary level work measurement data and cost associated with work measurement implication and the difficulties of using work measurement data to compare defense and commercial contractors. But I don't want to leave you thinking that work measurement cannot be used to significantly improve manufacturing performance. When used properly, it can.

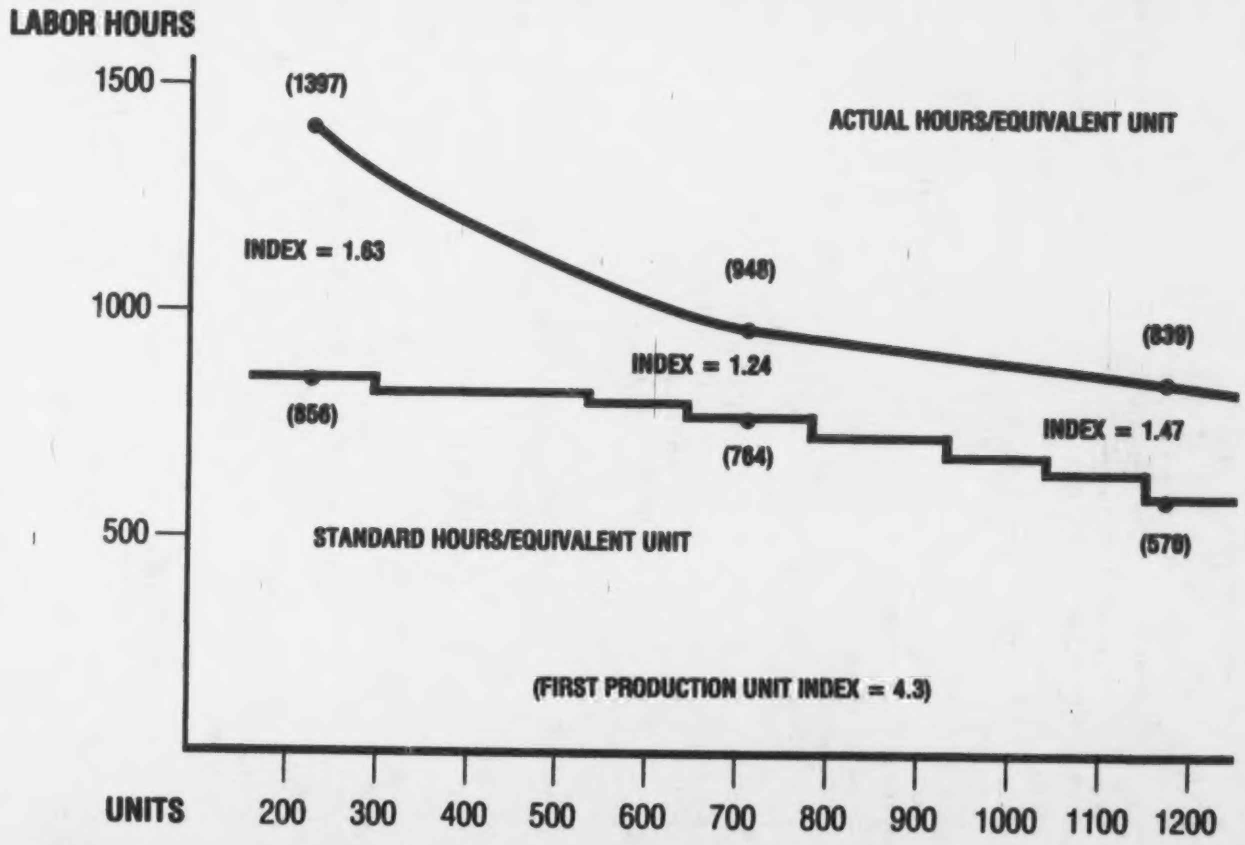
The Air Launched Cruise Missile is a good example. There we implemented good pricing and tough negotiating, an emphais on improving factory efficiency and a substantial methods improvement program. The result was significantly fewer actual direct manufacturing labor hours required to build the missile.

We went from over 24,000 hours for the mostly hand-built prototype to about 1,500 for the 160th unit to less than 800 hours after more than 1,200 units. We estimate total savings at over $220 million.

This chart demonstrates the fallacy of relying on summary level work measurement data. It shows direct manufacturing labor performance on the Air Launched Cruise Missile during production. We haven't even attempted to include development or early production data because of problems of scale. If we included the development effort of 24,000 hours, we wouldn't be able to see the continued production improvments we've made.

[The chart referred to follows:]

PERFORMANCE TO STANDARD NOT WHOLE STORY!



General **Skantze**. In any event, the point I want to make is that summary level data mask the impact of methods improvement. Methods improvements focus on improving manufacturing operations to reduce labor requirements, the labor time standards or "should take" times.

In the case of the ALCM, as I said earlier, improvments were significant.The ratio of actual manufacturing hours to standard hours—the performance index—was 4.3. That translates to about 23 percent factory efficiency. By unit 220, by about the first quarter of fiscal year 1983 on that chart, the performance index was 1.63. It was reduced to 1.24 by unit 710, about the first quarter of fiscal year 1984, but by unit 1180, about the first quarter of fiscal year 1985, it was back up to 1.47.

Was the contractor's performance really deteriorating? The answer is no, because the actual manufacturing hours had declined from 948 to 839. Therefore, the real cost to the Government declined, despite the rising performance index. This cost reduction was the result of a significant effort to improve the manufacturing methods rather than focus totally on performance index or production efficiency. We must encourage, not discourage that kind of performance.

Another work measurement success story is the Navy's F/A-18 airplane, a major portion of which is build at Northrop. When we convinced Northup of the value of applying work measurement concepts in the F/A-18 assembly areas, Northrop realized better planning, scheduling, budgeting and more effective variance analysis, all of which drove improvement. The result is $67 million saved over the 11-year life of the U.S. Navy and the Canadian F/A-18 production program.

This concludes my work measurement summary.

I would now like to——

Senator **Proxmire**. Can you finish in about 5 minutes?

General **Skantze**. Yes, sir.

I would now like to briefly address another cost-cutting tool, which we in Air Force Systems Command are selectively using in our war against escalating costs. In addition to the normal cost of technical analysis done on all our programs, we selectively apply a full should-cost review, where we expect a high payoff. Should cost is a contract pricing technique which employs a team of government acquisition managers, contractor administrators, auditors and engineers to conduct indepth cost analysis at a contractor's plant.

The objective of such review is to identify inefficient and uneconomic practices and to quantify these findings as to their impact on cost. Like work measurement, this technique is not new. As a program manager, I use the should-cost team to support negotiations for the first major Short Range Attack Missile buy in 1971.

We, in Air Force Systems Command, fully support the use of should cost as a pricing tool and have developed a command policy for considering its application on our major programs, and our policy requires that all major noncompetitive production contract proposals be considered for a review. The proven value of should cost, as a pricing technique, is its high payoff potential when used selectively.

The number of programs using should cost for pricing or negotiating contracts, has increased from two in 1983 to nine programs involving 17 contracts, scheduled for 1986. The key to effectively utilizing should cost is to apply it in a manner that maximizes the utilization of limited resources—I encourage my field activities to focus their reviews on those areas of a contractor's operation that have high payoff potential. It's often forgotten that reviews are not cheap.

Our studies show a full team should-cost review requires an average of 67 man-months of effort. Even tailored reviews average approximately 32 man-months of effort. Because of this, we selectively apply this to assure optimum feedback.

The key ingredient, obviously, for optimum results, is highly skilled team members. The skills of our people have increased significantly, but the numbers we have are limited.

I'll terminate my statement here, Mr. Vice Chairman.

[The prepared statement of General Skantze follows:]

PREPARED STATEMENT OF GENERAL LAWRENCE A. SKANTZE

I am pleased to have this opportunity to testify about a subject in which I have a deep personal commitment. I am not an industrial engineer. I am, however, a program manager--and work measurement, primarily as embodied in Military Standard 1567A (MIL-STD-1567A), is a fundamental weapon in any program manager's management arsenal. MIL-STD-1567A is a performance-based document that provides broad criteria which a disciplined, effective contractor work measurement system should meet. MIL-STD-1567A focuses on direct manufacturing labor--typically about 10-20 percent of prime contractor costs. Application of the MIL-STD ensures contractors monitor and improve direct manufacturing labor performance while simultaneously providing government visibility into their progress.

The foundation of a work measurement system is the labor time standard. The labor time standard is established by contractor industrial engineers. It represents the time a particular task "should take" a trained worker during mature production. That is, the contractor industrial engineer who establishes the labor time standard does not expect actual performance to equal the labor time standard until mature production. Mature production is that point during a program's production cycle when "start-up" problems have been eliminated--when all the required manufacturing processes and equipment are functioning smoothly. Frequently, mature production is assumed to be reached at production unit number 1000. However, significant changes in the product (for example, engineering/configuration changes) resulting in changes in manufacturing methods, significant "breaks" in the production schedule, or a significant increase in new employees, may delay "mature production" considerably beyond unit 1000. Most defense systems, because of their relatively low production volume and frequent design improvements, never reach "mature" production (as defined by the industrial engineer when establishing the labor time standard).

Personally, I have been committed to the work measurement concept since I was the program manager for the Short Range Attack Missile in 1971. Even though the concept--at least as far as DOD was concerned--was still in its infancy, I recognized its value. I took particular advantage of the pricing and negotiating insight work measurement data provided.

Work measurement concepts have been used to improve labor performance in the non-complex repetitive environment of the private sector for many years. However, they have been adapted for the complex, non-repetitive world of defense systems only relatively recently. Several studies in the early 1970s (the Lyon Study in 1971, the Sagamore Study in 1972, and Project ACE (Acquisition Cost Evaluation) in 1973) convinced Air Force Systems Command (AFSC) that additional production management emphasis was necessary to improve labor force productivity. As a result, AFSC "invented" work measurement for Air Force acquisitions in the form of MIL-STD-1567 (USAF) in 1975.

In 1977 AFSC convinced the Joint Logistics Commanders (JLC) to agree to develop a DOD work measurement military standard to replace the existing Air Force standard. (The JLC are the commanders of AFSC, Air Force Logistics Command, Army Materiel Command, and the Deputy Chief of Naval Operations (Logistics). Together, we encourage cooperation among the services on common weapons acquisitions and logistics support issues. We also present a unified position to those contractors who do business with more than one service.) The development process was extremely slow. Tri-service consenus was difficult to achieve.

In June 1980, the General Accounting Office issued a report to Congress praising AFSC's initiative on work measurement and recommending a DOD military standard be issued replacing the Air Force standard. Finally, in 1982, the draft DOD standard was completed.

Then, in 1983 we led the fight to have the draft formally accepted by the entire DOD. The result was MIL-STD-1567A published on March 11, 1983. Since then we have steadily improved our position as work measurement leader within the DOD. We now have included requirements to develop and implement a work measurement system in over 70 percent of our major system contracts. We are using the work measurement data to more effectively price, negotiate, and manage our contracts.

Specific benefits which we expect to accrue include:

1. Visibility into labor inefficiencies at the level at which the problems occur.

2. More objective performance improvement goal setting.

3. Easier comparison of alternate manufacturing methods by comparing the labor time standards required to complete a task using one method with those required using the alternate method.

4. Better pricing/negotiating insight by using performance against labor standards as a tool to evaluate past performance and forecast future improvements.

My record of support is clear. I reinforced work measurement labor standards as the basis for pricing and negotiating manufacturing labor costs in a 30 August 1984 letter to my product division commanders. That policy letter confirmed that "actual" costs from earlier acquisitions would not be accepted without careful scrutiny. I committed that AFSC would use labor standards to establish a firm baseline against which we would identify, quantify, and evaluate the impact of any previous unacceptable contractor performance, unusual circumstances, or anticipated production improvements. In addition, I announced that whenever labor standards were available--whether or not MIL-STD-1567A was on contract--AFSC representatives must use them to plan, program, and budget acquisitions, negotiate contracts, and monitor subsequent contractor performance. And then I further reinforced this direction with a formal "Commander's Policies" regulation in April 1985.

Since October 1984, I have required my program managers and Air Force plant representatives to regularly advise me of their progress during program assessment reviews and contractor management reviews.

In January 1985, I sponsored a joint agreement with the Joint Logistics Commanders to pursue a policy of broad, consistent contractual application of MIL-STD-1567A.

In October 1984, I prodded 32 major defense contractors to institutionalize MIL-STD-1567A in their performance measurement and cost estimating systems. In February 1985, members of my staff met with manufacturing executives of these same companies to identify and resolve any obstacles impacting effective work measurement implementation. Since that time, we have consistently emphasized--to both government and contractor executives--that we are serious about requiring our contractors to use work measurement as a tool to significantly improve direct labor productivity throughout the defense industry.

Finally, there has been considerable discussion recently of remarks I've made expressing concern about pending work measurement legislation. My concerns certainly are not related to the value of applying work measurement to defense contracts. Rather, for reasons my later comments will explain, I am primarily concerned with the qualifications of those people outside of Air Force Systems Command who will interpret the data, and the use to which they will put it.

Having clarified my position on work measurement, I'd now also like to clarify my position on defense contractor productivity. Let me state clearly that neither I nor Air Force Systems Command is satisfied with the productivity of its contractors. And that is the fundamental reason we've emphasized the importance of a disciplined, cost-effective contractor work measurement system. But I think we've even gone a step further.

Traditionally, work measurement has been defined as a comparison of the actual time required to complete a task to the time it should take (represented by the labor time standard) to complete the same task. It has been used primarily as a tool to evaluate the efficiency of individual workers. Certainly this is an important aspect of labor force productivity. However, as we have learned time and time again, the labor force can only be as productive as management permits. And it is management's responsibility to provide individual workers whatever is required to do a good job.

And this is why AFSC has expanded the traditional definition of work measurement. Just encouraging the worker to work harder is not enough. Work measurement must also be used to help management work smarter. By not being interested only in "operator" efficiency, we can impact total or "factory" efficiency. Operator efficiency includes only activities for which the operator is accountable. The operator is normally not responsible for "unmeasured" work (work without labor standards). The operator is also not normally responsible for "idle" time due to the delays awaiting parts, materials, or inspection; or for machine downtime. Finally, the operator is not normally responsible for rework, repair, or scrap due to engineering changes or vendor problems. However, contractor management is responsible--and we intend to hold that management accountable by measuring and evaluating factory efficiency.

This represents a fundamental departure from classical industrial engineering practices. It is such a departure that it has not yet been adopted by many commercial companies. But it is a significant step forward, and one of which we are proud.

One of the ways to force labor performance improvement is to price it into our contracts. We've found that a tight budget drives improvement. Although only about 15 percent of our prime contractor costs are for direct manufacturing labor, we have been focusing increasing attention on the use of labor standards to price and negotiate contracts. We think we're making good progress, but we're determined to do better. And this, once again, points up the importance of factory versus operator efficiency. We must negotiate our contracts on the basis of factory costs to the government.

The mechanism used to permit such factory pricing is the realization factor. Realization factors include all direct manufacturing hours charged by a worker or group of workers. Such hours include time on tasks covered by labor standards; time spent on "unmeasured work"; idle or lost time due to delays awaiting material, parts, or inspection; and machine downtime. We have also committed to break these realization factors down into component parts so they can be evaluated.

Typically, realization factors include the impact of:

1. Learning - such as worker familiarization and instruction in reading engineering drawings and operation instructions.

2. Technical problems - such as engineering changes, design errors, fit problems, operation instruction errors, tooling errors, and scrap/rework/repair.

3. Logistics problems - such as incorrect or missing parts and waiting for inspection.

This visibility allows us to quantify the causes of past performance, estimate future improvements, and institutionalize those improvements in the negotiated contract price.

There is another task for us. As we've progressed in our efforts to consistently apply and enforce the provisions of the MIL-STD, we've also recognized the need to develop uniform criteria--across the DOD--for evaluating and validating contractor work measurement systems. This is not such a difficult task in those contractor facilities where our Air Force Contract Management Division has administration responsibilities. However, many of our contracts are with companies without this resident Air Force representation. For those cases, we needed the support of the other services and the Defense Logistics Agency (DLA). That is why we were enthusiastic supporters of the recent DOD drive to develop uniform MIL-STD-1567A application guidance. We coordinated that guidance within all the services and DLA; and forwarded a consensus document to the DOD Standardization Office. The coordinated document:

1. Explains government objectives in applying the MIL-STD and issuing application guidance.

2. Emphasizes high payoff areas such as using labor standard data as a "should cost" tool to estimate, price, and negotiate; encouraging significant methods improvement; encouraging significant "variance" improvement; and measuring contractor performance.

Some aspects of the process have been actively debated, but we see such guidance as an important vehicle to assure a cost-effective, performance improvement focus in contractor work measurement systems.

We have taken the first steps leading to improved performance by contractually applying, enforcing, and using MIL-STD-1567A. But, as we've applied the MIL-STD and evaluated the data, we've also become much more knowledgeable about what that data really means.

We've found, for instance, that summary level work measurement data will not necessarily present a consistent picture with which separate contractors can be compared. Although most predetermined time standard systems produce theoretically accurate labor standards (normally within ± 10 percent), the way in which the standards are developed can still vary considerably. For example, some contractors include in their "standard" some provision for inefficiency (such as learning, anticipated rework, searching for missing parts or tools, waiting for inspection) and use that "adjusted standard" as their baseline from which to measure performance. Such a procedure masks the true performance improvement potential and is therefore not desirable. Some contractors include "set-up" (planned work necessary to get ready to perform a task) as "variance" or "inefficiency." Others include set-up in the labor time standard. For the small lot sizes typical in the defense industry, set-up labor hours can be substantial.

Contractual application and enforcement of MIL-STD-1567A can eliminate some, but not all, of these differences. MIL-STD-1567A provides broad criteria which the contractor's work measurement system must meet. It does not (and should not) specify exactly how the contractor is to meet those criteria. Defense contractor products, processes, and management systems are too different to do that. Therefore, it cannot eliminate all differences in work measurement systems.

Another factor which can cause confusion is the "phase" of the program. During program development, design and manufacturing instabilities are common. Due to their relatively high cost, precise "engineered" labor time standards (such as those developed using predetermined time standard systems) are generally not even established until manufacturing methods and processes have been stabilized. "Estimated" standards are usually used during development. Although not as reliable as engineered labor standards, estimated standards can still be used to measure, evaluate, and improve performance. After all, the purpose of development is to identify and fix problems--to get ready for production. Design requirements often dictate changes in manufacturing processes. These processes are continually evaluated and refined while the contractor attempts to learn how to build an extremely complex, state-of-the-art weapon system, which has never been built before. Inefficiency is, unfortunately, an unavoidable by-product. Even after transitioning to production, inefficiencies often remain because of the complexity of the manufacturing process.

Having explained these difficulties, let me also emphasize that we cannot--and do not--wait until production begins before we apply work measurement principles. We apply MIL-STD-1567A to full-scale development (FSD) contracts. A good example is Peacekeeper where the MIL-STD was applied (in FSD) to 13 separate associate contractors. Furthermore, work measurement data was collected and evaluated for all of those contracts. But, in this phase of a program, trends--not necessarily the absolute values--of the data are most significant.

We expect defense contractors to make steady, significant progress to drive actual manufacturing labor performance toward the labor time standard. However, weapon system requirements are continuously reviewed and improved as technology, or an identified foreign threat, changes. These changes often require manufacturing process changes which then must be developed and refined. This serves to delay achievement of true "mature" production-and also of "standard" performance. Weapon systems in development or early production cannot be expected to be produced as efficiently as those in mature production. These program differences, as well as those differences (described earlier) in the labor time standards themselves, make comparison of separate contractors, or even of separate programs within the same contractor facility, extremely difficult.

There are those who regularly compare defense contractor performance with that of commercial contractors. All too often, however, the comparisons are not valid. One of the chief obstacles to reliable comparison is simply the "yardstick" with which comparisons are made. As discussed earlier, most commercial companies use work measurement to measure "operator" efficiency. We in the defense community, however, must measure "factory" (or overall) efficiency. Again, as discussed earlier, there is a difference--usually a significant one.

Additionally, the environments in which commercial and defense companies operate differ substantially. The defense industry can be characterized as one of limited production volume, and extremely complex, state-of-the-art equipment and systems which are produced nowhere else in the world.

The "cycle times" (aggregates of individual labor time standard elements required to complete specific tasks) for operations common to defense systems can be extremely long, sometimes as much as 20-30 hours. This is especially true in final assembly where some operations exceed 80 hours.

Most commercial businesses which apply labor standards are high volume producers of relatively simple products. Operation cycle times generally range from seconds to minutes. These extremely repetitive, short-cycle operations are inherently more efficient (particularly when remembering the "factory" efficiency concept) than less repetitive, long-cycle operations. Long-cycle operations contain more elements (which together eqwal the "operations") to be sequentially performed. More work elements mean higher error potential. There is considerable unavoidable delay to recheck instructions, repeat steps performed, and determine the specific method to be used in intermediate process steps. There is also a stronger potential for wrong or missing parts, and tooling problems.

Another measure of complexity--which once again highlights the differences between defense and commercial products--is "standard labor hour content." The standard labor hour content of a product is the sum (normally specified in hours) of all the labor time standards required to complete that particular item. For example, a well-known truck manufactured in the United States has a standard labor hour content of about 11½ hours. That is, because of large production volume and stable design, automation has reduced the amount of direct manufacturing labor required to build this truck to about 11½ hours. The standard labor hour content of a well-known line of consumer and industrial tools varies from approximately 1-3 hours. The standard labor hour content of a well-known tractor is approximately 1000 hours. Even for relatively complex, small commercial aircraft, the standard labor hour content is only about 16,000 hours.

By contrast, the standard labor hour content of the B-1B airframe (not including engines and avionics) is approximately 235,000 hours. And we're building only 100 B-1Bs over several years--not several thousand articles per month as many commercial companies do. Experience has proven that these factors make a significant difference in performance. But despite these significant differences, even well-respected United States commercial companies experience performance inefficiencies when transitioning from development to production. Even high-volume producers of relatively simple equipment do not meet "standard" (at the factory level) during development or early production.

We have consulted numerous nationally recognized "experts" in work measurement. All agreed that commercial companies do not usually achieve 100 percent factory efficiency during early production. All agreed that production stability and maturity are critical to achieving performance to standard at the factory level. All further agreed that production stability and maturity does not occur automatically at some specific unit number--whether it be 1 or 1000. Rather, it is that time by which the design, technologies, processes, and production quantities have stabilized. An efficient production rate is also a necessity. Finally, they all agreed that many defense systems, because of their complexity, relatively low production volume, and frequent design improvements, may never reach 100 percent factory efficiency.

We have also interviewed representatives of successful commercial companies to discuss actual factory-level performance. Based on the information we obtained from our commercial company survey, and our own experience with defense contractors, 100 percent factory efficiency remains an objective not easily obtainable--particularly during development or early production. Therefore, it is not easy to generalize on what performance should be expected. In any event, we have chosen to focus our emphasis on reality, not theory. While it may not always be possible to say 100 percent factory efficiency (or 90 percent, or 80 percent) is expected, it is possible to say that 90 percent is better than 40 percent. Therefore, we are emphasizing significant improvement over time. We are also monitoring progress closely.

Former Secretary Orr also agreed. In a memo to General Gabriel dated 24 Jul 85, the Secretary noted:

> "We recognize there are concerns that institutionalizing work measurement in defense contracts is not always the same as commercial manufacturing. The rigid engineering time standards we require contractors to develop are based on mature, stable production environments. The defense industry as well as commercial companies do not expect instant achievement of standard, but plan to meet the standard at stable, mature production. Given this reality, we should strive to drive actual performance toward standard as quickly as possible."

Because of this emphasis--and despite all the problems--we have experienced several notable success stories.

The Air Launched Cruise Missile (ALCM) is a good example. By integrating good pricing and tough negotiating, an emphasis on improving factory efficiency, and a substantial methods improvement program, we were able to reduce the actual direct manufacturing labor hours required to build the ALCM from:

Over 24,000 labor hours for the mostly hand-built prototype;
to
Approximately 1500 labor hours for the 160th unit;
to
Less than 800 labor hours after more than 1200 units.

Total savings are estimated at over $220M.

Obvious contributing factors were the relatively large production quantities and economical production rate (now about 40 missiles per month). Unfortunately, these stabilizing influences are the exception, not the rule, in most aerospace system acquisitions.

Our Air Force Plant Representative Office (AFPRO) at Northrop Aircraft has also used work measurement principles to cut costs. A major portion of the Navy's F/A-18 airplane is built at Northrop. MIL-STD-1567A is not on the F/A-18 contract. For many years the company refused to implement "Type I" (or "engineered") labor standards in the F/A-18 final assembly area. The AFPRO, however, was able to convince Northrop management that a pilot study in three final assembly cost centers had merit. That pilot study was successful and Northrop decided to expand the initiative to all F/A-18 assembly cost centers. We expect to see savings of $67M over the 11-year life of the U.S. Navy and Canadian F/A-18 production program. The savings are primarily the result of better planning, scheduling, and budgeting; and from more effective variance analysis/improvement made possible by the visibility afforded by better labor standards.

In summary, work measurement represents an excellent management tool to monitor, evaluate, and improve manufacturing labor performance. I continue to support the use of that tool. Air Force Systems Command continues to support the use of that tool. However, thorough knowledge of the subtle differences in individual contractor work measurement systems, and of the potential impact of factors such as production phase, complexity, and stability are necessary before any objective evaluations or comparisons can be made. Generally, this knowledge and understanding is present only in those individuals with on-going, detailed visibility into contractor manufacturing operations. Air Force Systems Command program managers and plant representatives have this detailed knowledge and understanding. Air Force Systems Command also has the commitment required to use this management tool effectively to cut costs.

I would now like to briefly address another cost-cutting tool which we in Air Force Systems Command are selectively using in our war against escalating costs. In addition to the normal cost and technical analyses done on all our programs, we selectively apply a full Should Cost review where we expect a high payoff. Should Cost is a contract pricing technique which employs a team of government acquisition managers, contract administrators, auditors, and engineers to conduct an in-depth cost analysis at a contractor plant. The objective of such a review is to identify inefficient and uneconomical practices, and to quantify these findings as to their impact on cost. Like work measurement, this technique is not new. As a program manager, I used this technique on the Short Range Attack Missile program in 1971.

We in AFSC fully support the use of Should Cost as a pricing tool and have developed a command policy for considering its application on our major programs. Our policy requires that all major noncompetitive production contract proposals be considered for review. The integrated government team's objective is to identify uneconomical or inefficient practices in the contractor's management and operations. The results of this review assist us in arriving at the government's negotiation position. Our goal is the development of a price objective that reflects realistic yet challenging economies and efficiencies.

The proven value of Should Cost as a pricing technique is its high payoff potential when used selectively. The number of programs using Should Cost for pricing and negotiating contracts has increased from two in FY 83 to eight scheduled for FY 86. The key to effectively utilizing Should Cost is to apply Should Cost in a manner that maximizes the utilization of our limited resources. I encourage my field activities to focus their reviews on those areas of a contractor's operation that have a high payoff potential.

But, it is often forgotten that reviews are not cheap. Our studies show that full-team Should Cost reviews require an average of 67 man-months of effort. Even tailored reviews average approximately 32 man-months of effort. Because of this, we selectively apply this tool to assure optimum payback from this intensive effort.

The key ingredient necessary for optimum results is highly skilled team members. The skills of our people have increased significantly over the past few years. One measure of these increasing skills is the amount of negotiation gain that can be attributed to Should Cost. In FY 83, AFSC reviewed proposals that were valued at $1.2 billion, but savings of only 2.6 percent of this amount were attributed to Should Cost. In FY 85, reviewed proposals were valued at $4.5 billion with Should Cost gain scored at 12.6 percent; I believe that our skill at performing Should Cost reviews is increasing and is the major contributor to this success.

In addition to sharpening our Should Cost skills, we are expanding into new areas of emphasis. Historically reviews have concentrated on direct expenses such as direct labor and material. Our new policy provides emphasis on total program cost, including special emphasis on plant-wide indirect costs and major subcontractor effort.

Now let me spend a moment on the subject of markups. The term markup means many things to many people. The term can include direct or indirect costs or profit. For purposes of discussion, today let me concentrate my remarks on the general category of indirect cost or overhead and how we control it.

First, the word "overhead" itself conjures up some unfortunate connotations. It is usually equated with such terms as "unnecessary" or "superfluous." In fact, overhead costs are as necessary to a final product as raw materials or direct labor. They typically include such things as the cost of buildings, utilities, management and supervision costs, and retirement and health insurance benefits.

To be really effective, our efforts to control overhead costs must begin early, before the costs are incurred and the money spent. We do this through what is called the forward pricing process. Our goal is to negotiate overhead rate agreements which are conservative, yet reasonable. If agreement on these rates is reached with the contractor, they are automatically incorporated into all DOD contracts with that company for as long as the agreement remains in effect. If an agreement cannot be reached, we unilaterally establish a challenging set of recommendations based on what we believe the rates should be and provide them to our contracting officers for use in negotiating potential contract effort. In any case, we do not blindly rely on what costs have been in the past, sometimes referred to as "Did Cost." Rather, we look ahead, we assess changes in the contractor's sales forecasts, his mix of business, people, and skill levels, as well as general economic trends. We also scope possibilities for enhanced productivity through advancements in state-of-the-art technologies, etc., to arrive at an estimate of what the product "Should Cost."

After these forward pricing rates are established, we do not forget them and turn to other matters while the contractor spends the taxpayers' money. Instead, we constantly track actual costs as they are incurred and compare them to what was originally projected. In this way, adverse cost trends are spotted early which helps us trigger corrective action. If these trends have a significant potential impact, we cancel existing rate agreements and negotiate new ones based on this updated information.

Even after all costs are incurred, the job is still not completely done. We go back after the dust has settled, audit all costs, and negotiate those which are not allowable or reasonable. The results of this final review are then applied retroactively to all contracts subject to adjustment, as well as to new work through the forward pricing process just described. Thus, the whole overhead "lifecycle" begins again.

In closing, let me say that these three techniques--work measurement, Should Cost, and overhead management--are three of our key tools which we in AFSC use to control costs. Rest assured that we--the Congress, myself, and every member of my command--share the same goal: To assure that the American taxpayer is getting the very best deal available. Thank you.

Senator **Proxmire**. Mr. Fitzgerald, would you like to make a statement?

STATEMENT OF A. ERNEST FITZGERALD, MANAGEMENT SYSTEMS DEPUTY, OFFICE OF THE COMPTROLLER OF THE AIR FORCE

Mr. **Fitzgerald**. Yes, Mr. Vice Chairman.

I would like to at the appropriate time present a short tutorial on this material. However, I withhold detailed comments because in going through General Skantze's prepared statement, I find that the bulk of it is the same, or the essential points are the same that my staff and I commented on last spring and summer when similar material was distributed widely by the Systems Command to the press.

The essential points, though, I think I could make right away and then save the tutorial.

That is that it seems to me that General Skantze is helping to confirm the fear that I have expressed before this subcommittee over a period of a numbr of years, especially in my testimony on the same subject in 1973, at which I expressed great concern that the philosophy generated in the Department of Defense procurement would affect our entire industrial body and damage our ability to compete in world markets.

One of the things that I wanted to address in the tutorial is the notion of what is a fair day's work. We now have almost completed the shift of viewing normal performance as the ceiling or the ultimate rather than the floor. I could draw an analogy that is familiar to the Senate.

You require beginning typists to demonstrate that they can type at 40 words a minute. If you were to adopt aerospace philosophy, you would say it is good enough to start at 4 words a minute, and we will approach 40 words as the ultimate.

And I think you also know the reasons that most typists—I know it is true in my own case—are very slow is that they do poor quality work. We find that good quality and good output go together, which I will also address in the tutorial.

Senator **Proxmire**. All right, sir.

General Skantze, your statement presents a tightly woven, well-constructed argument for your position, but the overall impression is that you are looking for excuses to avoid using should-cost reviews. You give reasons why should cost can only be used selectively, yet the Inspector General's report says that you are wrong, the Air Force is dragging its feet on should cost, and that billions can be saved if should-cost reviews were made of all major programs.

How do you respond to that?

General **Skantze**. First of all, I am a great proponent of should cost. As I stated, I was program manager for the Short Range Missile and had quite a number of people, skilled people, involved in that.

I think it was the appropriate time to do it because we were sole source to the Boeing Co. at that point in time, and we needed to get into as much depth, to find as many efficiencies as we could, and I think it paid off in that negotiation.

Since that time I have still been a proponent. We have done it, as I said, on 16 contracts over the last 3 years. We have 17 more projected for 1986. It involves a large number of very skilled people, and to be very frank, you know, with 233 programs——

Senator **Proxmire**. May I just interrupt for a moment, General?

You say you are a strong believer in should cost, and you say you have done 16 should-cost studies out of how many contracts; 16 out of how many?

General **Skantze**. Those 16, I can supply them for you. They are among our major contracts.

Senator **Proxmire**. How many contracts were there? You said 16. Can you give me a percentage? Is it 17 percent? Is it 50 percent? Is it 75 percent? What is it?

General **Skantze**. I have the total. If you took all the programs, I have a total of about 233.

Senator **Proxmire**. So you did 16 out of 233?

General **Skantze**. But some of those were competitive programs, and some of those were one-time competitive.

You don't normally do a should cost if you do a competition. You look to do should cost in sole source generally and follow on to competition.

Senator **Proxmire**. Then how many of the 233 were full-fledged competitive; that is, where the lowest bidder got all of the contract on the basis of the price?

General **Skantze**. I can supply that for the record, Senator.

Senator **Proxmire**. What would it be, roughly?

General **Skantze**. I had rather not guess at this point. I can supply it for the record.

Senator **Proxmire**. 10 percent of the noncompetitive you submitted, they were should cost?

General **Skantze**. I would rather supply that for the record, and I think the percentage of dollars will be considerably higher than just the percentage of contracts.

Senator **Proxmire**. All right.

[The following information was subsequently supplied for the record:]

Air Force Systems Command has currently scheduled formal Should-Cost Reviews for over 29 percent of the contracts which meet established criteria in FY 86. It is important to note that these contracts represent over 70 percent of the total proposed dollars that meet published criteria. All eligible contracts were reviewed for formal Should-Cost application. If a contract was not selected, it was for a valid reason. Of those not selected for an FY 86 Should-Cost Review, contracts representing another 5 percent of the total dollars are on programs that have received such a review in the past 3 years. I am committed to applying formal Should-Cost Reviews to those contracts where we expect to receive the highest return for the investment of our limited manpower resources.

There is an important distinction between formal Should-Cost Reviews and use of the should-cost techniques that need to be understood. While we have scheduled formal reviews on 29 percent of our contracts for FY 86, we continually use the should-cost approach and attitude in our contract cost analyses. We question and assess what a product should cost rather than blindly accept the past. The should-cost approach is an integral part of the process used by my contracting officers and program managers when preparing for negotiations on any contract.

General **Skantze**. We obviously put should-cost talent on the higher priced acquisitions because that is where it pays off.

Senator **Proxmire**. In your statement you say that the number of programs went from two in 1983 to eight in 1986. That is what your statement says.

General **Skantze**. There were more contracts. There were 10 contracts associated with the eight programs.

Senator **Proxmire**. Eight programs. All right, sir.

Go ahead. I am sorry.

General Skantze. You know, from my perspective, the biggest limitation we have on should cost is numbers of people with the right skills. We have not increased the numbers of people to any appreciable degree that we have in the acquisition business. So you want to husband those skills and put them on the programs which can provide the highest payoff and the highest leverage.

You know, if we have more people and we could afford to have a lot more people, I would like to do more should cost.

Senator **Proxmire**. So your problem is you don't have enough good trained people to do should costs?

General **Skantze**. To do everything at once, to do all of it continuously.

Senator **Proxmire**. How many people are in your command?

General **Skantze**. In the acquisition part of the business, it is about 19,000 who are in acquisition.

Senator **Proxmire**. 19,000, and not enough to do should-cost studies?

General **Skantze**. A lot of those are working on programs full time as managers. You do should cost by augmenting the people who manage the program.

Senator **Proxmire**. My question was—the Inspector General's report says you are wrong, that the Air Force is dragging its feet on should cost and that billions could be saved if should-cost reviews were made of all major programs.

Your position, I take it, is that you don't have enough people to do the job?

General **Skantze**. My position is I like should cost, and I think it pays off—I think you can selectively apply it and get a lot of leverage on the high-dollar acquisition programs.

We are doing, I think, a good number of the programs that have high dollars. If I had more peole, I would do more.

Senator **Proxmire**. The Inspector General examined 17 programs where contracts had been negotiated. During the negotiations, 7 of the programs have been subjected to should cost, 10 had not. Reductions in prices below the amounts proposed by the contractors were twice as large when should cost was used than when it was not. The Inspector General estimates that if should cost had been used on the 10 programs, $6.9 billion would have been saved.

Do you dispute that?

General **Skantze**. I don't know how he derived the $6.9 billion. So I can't agree or disagree.

Senator **Proxmire**. Did you read the report?

General **Skantze**. I read the report, but it didn't indicate any detail as to how they arrived at the $6.9 billion. It just said we extrapolated.

Well, I don't know what they extrapolated from because each one of those programs may be in a different stage of production, and the ability to get greater efficiency——

Senator Proxmire. General, you have an enormously important responsibility, and you are a fine general. It seems to me that it would be logical to expect you to go to the Inspector General and find out what were the details of how he arrived at that in view of the fact that you say you didn't have enough data in the report.

General Skantze. Not in the report.

Senator Proxmire. Why didn't you go to him and ask and find out about it?

It seems to me this is a very serious criticism.

General Skantze. I agree, and I have just seen the report.

Senator Proxmire. Have you gone to them and asked them what the details are?

General Skantze. Not yet. I have been getting ready for this hearing, Senator. [Laughter.]

Senator Proxmire. Wait a minute. The report was released in September.

General Skantze. I haven't had time to talk to my wife in the last few weeks.

Senator Proxmire. I suggest maybe you can talk to her tonight, but you have had September, October, and November. This is December. It is almost Christmas.

Haven't you had a chance in that 3-month period?

General Skantze. I have not seen the report.

Senator Proxmire. Even though it was released in September? I can't think of anybody more important to see that report than you.

General Skantze. On a day-to-day basis, you know, I am managing a command.

Senator Proxmire. I know you are, but there are recommendations directed specifically at you at the Air Force.

General Skantze. And we are doing should cost in the command, and we believe in it, and we are laying out our program for 1986, and I would like to have the numbers of people to should cost everything.

I would like to make another comment, Senator. I was also the AWACS program manager. On the first option buy, the first buy, which was very critical to us when we bought the first six AWACS, we put an enormous effort into the fact finding and auditing of that, and it was sufficient to really, in retrospect, call it a should cost. And we made a 15-percent reduction in the proposal from the Boeing Co. to what we finally negotiated.

So I think if you got a little bit below the surface, you would find that there are very many indepth, exhaustive negotiations going on, even though they don't have the should cost title on them.

Senator Proxmire. Now, the Army uses should cost in all its major programs and, according to the Inspector General, achieves savings well worth the cost of the reviews. The Army obviously disagrees with your conclusion that should cost is too expensive to be used in all major programs.

Have you ever discussed this with your counterpart in the Army?

General **Skantze**. No, but I am going to go talk to Dick Thompson after I have read the report. But I didn't say it was too expensive. I said that the problem was that to do all the things that we would like to do, we don't have that many people.

Senator **Proxmire**. You did raise the point of cost. You gave the number of man-hours that should cost requires. You raised that.

General **Skantze**. It is expensive in manpower.

Senator **Proxmire**. You say you didn't have the manpower with the 19,000 people you have in your command.

General **Skantze**. The 19,000 for the most part are engaged on a day-to-day basis in managing programs, and should-cost teams augment the program office. So the should-cost teams are drawn from other places and added to the program office manpower for that period.

Senator **Proxmire**. Let me tell you why I thought you were mentioning costs. You said it is often forgotten that reviews are not cheap. Our studies show that full teams should-cost reviews require an average of 67 man-months of effort. Even tailored reviews average approximately 32 man-months of effort.

Because of this, we selectively apply this tool to search for optimum payback in this intensive effort. So it seems here you are talking about cost as well as manpower.

General **Skantze**. I am talking about expensive in manpower. You see, if I had more people, I would use more people on should cost.

Senator **Proxmire**. Why don't you train more people to do this?

General **Skantze**. I have to get more people because the people I have, those 19,000 people are fully engaged in managing ongoing programs. So when you put a should-cost team together, you have to draw people from within and augment the programs that you are going to do the should cost on. It is an augmentation process.

Senator **Proxmire**. Let me ask Mr. Fitzgerald, what is your judgment on this? Are there sufficiently skilled people in the Air Force to do this should-cost work?

Mr. **Fitzgerald**. There are certainly not as many skilled people as I would like to see. However, the basic problem is attitude. Should cost at root is a state of mind. It is a state of mind that rejects the notion that whatever the contractor has been spending is a good cost unless it is labeled for bribes or prostitutes or something equally reprehensible.

When my associates and I began doing what is now called should cost in the early 1960's, not 1968 as the Inspector General said, we did it, Senator, because we could do it more quickly and less expensively than with the big gaggles of factfinding people that are used to do statistical analyses. And as a matter of fact, when the work measurement as such was first brought up in connection with price analysis, should costing if you will, in 1966, not 1975, the Aerospace Industry Association endorsed the Air Force Systems Command objective to use work measurements to reduce factfinding at negotiating time and to improve contractors' cost estimates.

Senator **Proxmire**. You say we could economize both on dollars and manpower?

Mr. **Fitzgerald**. That was our finding. With really skilled people, we could do it quicker than traditional methods.

Dr. Driesnak, who at the time was the Assistant Vice Chief of Staff—I can supply his speech for the record—in, I believe it was, 1983 made the same point. He rejected the huge team approach.

This subcommittee has heard testimony on this subject over the years, and I think the 1973 testimony was significant in that regard.

What happened when this committee endorsed should cost in 1969 was that the aerospace community especially, the contractor community generally did not want to do it, for obvious reasons. It is not in their best short-term interest. So they changed the process that we call should cost to something different. It became a long, qualitative, drawnout, expensive procedure rather than a quick-hitting, incisived quantification of fact.

Essentially what was done in the Air Force, in my view and recollection, is that a previous procedure called the IMASS, the Industrial Management Systems Survey, was adopted to the should-cost approach, where they do a lot of procedural reviews that we would not have done when we were first starting this.

The problem is compounded by the fact that many of the best practitioners had been excluded from the practice. I testified in June 1969 that the best cost cutters were being systematically pushed out of the industry. That has happened. There is some continuation of it.

We have a saying in our office in the Pentagon that we spend too much time keeping the cannibals from eating our missionaries. It seems that every time we have a really tough cost cutter we have to spend almost full time protecting him or her.

Senator **Proxmire**. General Skantze, would you like to respond? He has made a pretty direct contradiction of your testimony.

General **Skantze**. Well, you know, I have a difficult time trying to track what Mr. Fitzgerald says. I can only go back to my own experience as program manager, as a product division commander, and as AFSC commander.

We are always looking for efficiencies of how to conduct things, like factfinding and should costs, but when you get down to where a contractor gives you a proposal for production, say a B-1 or say an F-16, and has to provide sufficient data to support that proposal, cost data and price data, engineering data, that factfinding process takes a good deal of time if it is a major proposal. I don't readily see how you shortcut that.

I would agree with Mr. Fitzgerald to the extent that we have work measurement data, that that is useful, but as I pointed out on the first chart, that is only 10 to 20 percent of the cost. It is the other 80 to 90 percent of the costs that we have to get at, and that is not a cost that is based on work measurement data, and it takes a lot of tough factfinding to go through the cost and pricing data and the technical data to understand what you have and to compare the manufacturing hours with what you think is reasonable or to compare the other direct costs to find out what is reasonable, which includes the overhead costs.

Factfinding is a tough process, and I don't know in my experience of any simplified way to go in and do that, and work measurement only helps you with 10 to 20 percent of it.

Senator **Proxmire**. It is my understanding, Mr. Fitzgerald, that should cost works on all costs. It is not confined simply to any one single component of costs, but it covers the whole works.

Am I incorrect?

Mr. **Fitzgerald**. That is absolutely correct, Mr. Vice Chairman. In the beginning—and I think you have some examples from past testimony—we achieved some of our biggest savings in the indirect cost areas.

Senator **Proxmire**. You say should cost enabled you to achieve some of your biggest savings in overhead?

Mr. **Fitzgerald**. Oh, yes.

Senator **Proxmire**. General Skantze just said it wouldn't be covered by should cost.

Mr. **Fitzgerald**. If they do it right, they should be.

General **Skantze**. Mr. Vice Chairman, let me correct that. What I said was Mr. Fitzgerald made a comment that if you have standard labor standards that would help you do your factfinding quicker. That is true, but that is only 10 to 20 percent of the costs.

The bulk of what you are really trying to get at in should cost is that other 80 to 90 percent.

Senator **Proxmire**. Now, I understand that both of you gentlemen are talking about the same thing. Should cost does cover everything; it does cover overtime?

General **Skantze**. Absolutely.

Mr. **Fitzgerald**. The problem has been—and I think the Inspector General made note of this—that we haven't done much with that area.

As a matter of fact, in one of the few should costs that I was able to get visibility on, and then only after it was done and negotiated in the Air Force, the negotiating team actually recommended an increase in engineering overhead on the basis of extrapolation of trends of actual rates, which is the antithesis of doing should costs.

We have neglected that area since the Gordon Rule study at Pratt & Whitney in 1968. That is the last one I can recall where we did a good job on overhead.

Senator **Proxmire**. General Skantze, as you know, government regulations require the use of should-cost reviews unless the contracting officer determines the potential savings do not justify the expense of the review. The Inspector General found that in virtually all instances where the Air Force does not do should-cost reviews the contracting officer had failed to do any type of cost effectiveness analysis to determine whether should cost was warranted.

Doesn't this mean the exception has been turned into a gigantic loophole to the benefit of the contractors?

General **Skantze**. Well, we had several meetings laying out the fiscal year 1986 should-cost program. From my standpoint in headquarters and the policy we have—as I said earlier, when you try to pick out the number that would have the greatest payoff to us, like the F-16's second model year that is coming up, and we put into practice those candidates to go and do should cost, in my judgment we tried to use our assets to the best of our ability.

I repeat again, should cost is an important tool I want to do as much as we can, but I want to do it in a way that we get high leverage for what we do and it pays off, and I think we are trying to do that.

Senator **Proxmire**. Government regulations say you must do it unless the expense has been warranted.

You are a military officer, and the military trains people to follow orders. I learned that in close order drill, and I am sure you did when you were in your first years in the military. Follow orders whether you like it or not, whether you think they are right or wrong.

Why do you condone the flagrant disregard of orders? Why have you allowed your contracting officers to, in effect, disobey government regulations?

General **Skantze**. I don't think we are flagrantly trying to disobey government regulations. I think we are committed to the should-cost program. I think we are doing it as best we can within the resources and trying to do it in a way that it pays off, with the highest return on investment for the people we put into it. We have picked out the programs to do that.

Now, you know, you raise an interestng point in the sense of, truly, is the Government regulation so rigid that it asks us to do should costs beyond our capabilities to put people on it?

The point is that we do one hell of a lot of factfinding, Senator, in all of these programs and spend an enormous amount of time, and while those detailed factfindings may not be identified as being "formal should costs," they have the same objective as getting to the most effective and cost effective price that we can for what we are buying.

Senator **Proxmire**. Mr. Fitzgerald, you have some slides here that I think are very dramatic and will be very helpful to us.

In your many appearances before this committee, dating back to 1968, you and others such as the late Gordon Rule of the Navy and John Fox, former Assistant Secretary of the Army, have testified at great length about should cost.

Once more for the record, can you briefly recount the background of the should-cost approach and how work measurement and standard labor hours fit into it?

Mr. **Fitzgerald**. Yes, sir, I think I can. I believe the staff has a couple of charts that will be helpful to us, if you would put those up in addition to the viewgraphs.

I want to elaborate on a point that I made earlier. Should cost is really a state of mind.

[Slide.]

That state of mind would automatically reject this basic rule that I have on the viewgraph that says one definition of a fair and reasonable price included in the ASPM—that is the Armed Services Procurement Manual—is a price that closely approximates the seller's costs to make or acquire the part plus a reasonable profit.

That is crazy. That says to the contractor that you should maximize your costs, your allowable costs, so long as you are not threatened by competition or other difficulties.

The proper approach to should cost—and I believe that General Skantze and I would all agree on this—would be to reject this notion flatly unless they have already achieved some irreducible minimum or practically reducible minimum of cost.

We haven't done that. We have not changed that rule. I submit that when we get serious about it we will change that rule.

[Slide.]

Should cost, as General Skantz says, should attack more than just the factor of labor.

This is taken from my 1973 testimony on the same subject, where I showed that with should cost, as in any other normal cost analysis, we broke the whole ito its parts—factory labor if you have it, material, subcontract, overhead, and general administrative expenses—attacked each one of them, squeezed them down, put it back together. In 1973 we did not generally get a breakdown on negotiated costs.

Just recently, Assistant Secretary of Defense Wade has revitalized that. We now would have visibility on what is negotiated, and then we would have the actuals. This is the kind of thing that Congress should be able to track on an onging basis.

I want to touch on the utility of work measurement again, since General Skantze spent a lot of time on it, and give you a case study.

[Slide.]

When I first got back in the business—well, let me finish this point first—when I first got back in the business after an absence of many years, during which, I must say, not a great deal was done—I don't think it was because I was gone but because of a more permissive program of procurement—we submitted a program that was in draft form—and I have never been able to finish because of the lack of information—which would provide for ongoing should costs, if you will, at the contract administration level, continual grinding on these elements of costs so that when the fact finding team went in much of their work would be done for them.

[Slide.]

The first inquiry we made was into the Maverick missile, and I go back to the factory efficiency that we have talked about before,

We found in May 1982, when we first examined this, that the Maverick missile was being made at what appeared to me startling levels of inefficiency. I don't know when mature production is reached on the TV Maverick, but at this time the contracting people reported to us that they were working at about 42 percent of normal realization after making some 20,000 missiles and didn't seem to be improving.

On the infrared Maverick, which was originally sold as a slight modification to the TV Maverick, they were working at a startling level of 17.2 percent of standard. That is about 6 percent efficiency.

One of the things that should be apparent right away here is the early warning aspects of getting time standards soon, and at Hughes, this contractor, you can get them as the drawings are done. You don't have to wait till mature production or even till the factory starts working.

The predetermined time systems, which we used so widely today, were developed primarily in the electronics industry. We think Hughes makes a reasonably good application of them.

But what this would show, Senator, is that if we had this information available, Secretary Orr would not have had to read about the huge overruns and other problems of Maverick in the newspaper. He would have known as soon as the drawings were ready that the TV Maverick's 44 hours of standard work content was not just slightly increased. It was more than six times as much, and we would have had an early warning that we should do something with it right now.

Dr. Amlie, my associate, did the same thing for Amraam 2 years ago. It was said then that the Amraam was going to cost $78,000 in 1978 dollar base. When we got the bill of material, the bill of labor, it was immediately apparent that the costs were at least 10 times that at that time, and we now know that is the case.

Unfortunately, we haven't fixed everything. We made proposals, which I will skip over, to do this routinely, which were rejected by the military staff for reasons as yet unknown to me.

[Slide.]

Paul Chehan, one of our industrial engineers, followed upon the Maverick and found that a major cause of the huge cost overrun was bad quality. This was in the summer, the late summer of 1982, following our initial studies in the spring of 1982.

Now, this brings me, Senator, to my comment, a couple of my comments, on General Skantze's statement, his presentation. Fortunately, I think there is considerable grounds for agreement, and I am hoping—we all hope in our office that we are able, if we can break through the blue curtain, which we believe hurts General Skantze as much as it does us, that we can make really substantial progress.

I notice some progress in the prepared statement. In the prepared statement, the General stated that as a result of studies AFSC invented work measurement for Air Force acquisitions in the form of Military Standard 1567 in 1975.

Now, it seems to me that that cuts him off from a lot of rich experience in this area. As I have mentioned already, the experiences that we cited in 1966 and onward, after the Systems Command began looking—his own command now—at this were very, very enlightening and very useful to us.

If we could go back even further, the kinds of things that General Skantze is proposing to do are very good if they are followed through and reduced to practicality.

Let me say something about attainability, and, Senator, if you would indulge me, I would like to kind of address this as much to General Skantze, whom we sincerely want to help, as anyone else. Let me deal, if I may, with the notion go the changing environment in early phases of production.

[Slide.]

You have seen this before, General Skantze. This is a time study sheet. I will give you copies if you want to follow this. We have discussed this before, but not in detail, with General Skantze.

It is often argued, as General Skantze has argued, that in early production activities you have a lot of turmoil that you have to work very hard to keep the ratios of actual standard down below 10 even because of the changes in the way you do business.

Here is a case study of a complaint done on the seventh airplane of a new system, and we trying to wean—this is in the late 1950's—we were trying to wean the contractor off the learning curve notion, like you have on the chart here, that just good progress toward the standard was better than a flat curve. It obviously doesn't make any sense, but they tended to follow that because they had to.

Here, they were saying we can't do this, it is too early, and besieds we have great turmoil in the system. So rather than multiply the allowed time, which was 40 minutes for this job by large factors, if you were to take Geneal Skantze's friend's notion that you start at 10 to 1 and proceed on an 80 percent improvement curve, you would multiply this by 512 percent. What we did and what should be done routinely is to go out and study the job and find out how much extra work is done.

On No. 18 here you see, sure enough, they were right. There was extra work. There were faulty parts and tools. But how much time was that? Seven-tenths of a minute. A couple of licks with a file would fix it.

The point being that these things are vastly exaggerated in the telling. They talk about them as though they are dominating the whole manufacturing process. The fact is that these folks had done the same kinds of work for years in making sheet metal parts. You load a jig, you drill the holes, you take it down, you deburr it, you put it back together, and you rivet it.

It doesn't make that much difference if you are working on the first, the tenth, or the hundredth if the people know what they are doing, just as your typist does not have to start all over again every time you give her a new letter.

Mr. Hawe, who was the real originator of the work measurement standard, made that point very strikingly in his testimony this summer, saying that process controls should be the goal, and we agree.

Now, if we can get over that psychological limit of saying that 40 words per minute is the ceiling and make that a floor on performance, then I think we are off and running.

I will give to General Skantze and to the subcommittee, just to wind this part up, some rollup performance reports taken from the same thing, showing that if you do it right you can target and achieve 35 or 40 standard hours very early in the program.

You will see on the second sheet that in this program in several instances we got total hours, not just on standard, more than 40 hours for every hour expended, 40 standard hours of output.

Let me return just in conclusion to my concern about quality. I mentioned at Hughes that we found that the quality problem was the biggest contributor to inefficiency.

It is argued oftentimes by academics that there is a tradeoff between worker efficiency or realization and quality,. and indeed there is, and I have made a study of it, and I made it many years ago.

[Slide.]

Here is what we found—I should point this out—that there is a discontinuous abscissa, the horizontal scale.

In the company I was making this there simply weren't any people working below about 60 percent of normal output. Those people were working inefficiently partly because they were not skilled. They were making a lot of scrap, as we showed here, a lot of us, 5 percent, and we found that as their skills increased both their output and their quality improved.

So that at our incentive pace down here, around from 130 to 150 percent of normal—that would be 50 to 60 words per minute for a typist—we had the fewest mistakes.

And unfortunately for us, Mr. Vice Chairman, we tend to be accepting—and I think with our responsibility neither General Skantze nor I can really accept performance up in the upper left hand corner here, but we are. That is the unfortunate thing.

The sobering aspect of this is that our principal competitor, the people against whom we should be comparing ourselves, the Japanese, according to the American Institute of Industrial Engineers' study, are working, where they use their modern approach to work measurement, at 137.5 to 150 percent of normal output.

[Slide.]

Coincidentally, look where this falls on the cost-quality tradeoff. Down at the bottom. It illustrates once again good people do good work quickly. That is the kind of people we should be looking for and nurturing and fostering, not only in our contractor plants but in our own organization.

To turn to the broader picture and your point, across-the-board should cost, on the lefthand of the chart it shows results achieved on what was called coordinated improvement programs. The dramatic reductions, not only in factory labor but in overhead. You can see that there is a 71 percent inhouse unit costs achieved, with a substantial part of it due to a dropping of the overhead per direct labor hour from $5.10 to $3.85, a startling low figure for today.

So there is no reason under the Sun that if we do it right, we can't achieve savings across the board in factory and overhead.

Thank you.

Senator **Proxmire**. Mr. FItzgerald, you testified on September 6 that a blue curtain had descended around the subject. So it is almost impossible for you personally to get information about what the Air Force Systems Command is doing.

Can you be more specific about the type of information you cannot get and who is responsible for keeping it from you? Is the Air Force Systems Command responsible for blocking your efforts?

Mr. **Fitzgerald**. I can't say who is responsible conclusively, Senator. We know that we either do not get some information or at other times it takes so long that events have overtaken the request by the time it gets to us.

It appears that the staffing and coordination are part of the problem. At other times it is simply avoidance of embarrassment.

Senator **Proxmire**. Are you saying the Air Force Systems Command is preventing you from applying, should-cost analysis to Air Force cost estimates during contract negotiations, and if so, can you give us an example?

Mr. **Fitzgerald**. I can give you an example of where we were prevented. I can't say it was totally the doings of the Air Force Systems Command.

In the case of the IR Maverick, the infrared Maverick, missile should cost, which General Driesnak, then the Assistant Vice Chief, and I were pushing very hard in 1983, we were unable to even get figures on the findings of the factfinding team, conclusive figures, until after the contract was negotiated and it was too late to do anything about it.

I think that has turned out poorly. We have tried to get information on that, and only recently have we begun to get cost performance reports that confirm our feeling that things were not going well on the program.

This is the same project in which I mentioned that the factfinding teams had actually recommended an increase in engineering overhead.

Senator PROXMIRE. What was the result of the Maverick should-cost review?

Mr. FITZGERALD. My recollection is that the team recommended a should cost for inhouse work labor and inhouse factory labor and associated overhead and other direct charges of about $664 per standard hour of output. I don't know what was negotiated.

Senator PROXMIRE. Is that normal?

Mr. FITZGERALD. That is way too high.

Senator PROXMIRE. You had to go to court to prevent the Air Force from wrongly firing you. You won reinstatement but then had to go to court again to get your job responsibilities back. On June 15, 1982, the U.S. District Court in Washington, DC, approved an agreement between the Air Force and yourself setting out your responsibilities.

Among other things, the agreement made you:

> . . . responsible . . . for application of "should cost" and related analyses and synthesis techniques to Air Force cost estimating, and for Air Force economic cost effectiveness analysis.

Is the Air Force living up to its agreement?

Mr. FITZGERALD. No, sir.

Senator PROXMIRE. In what way are they violating it?

Mr. FITZGERALD. We are hampered in getting data that we need for analyses, and more importantly, the corresponding legal agreement that I would be allowed to give guidance and direction to the Air Staff and the Command on these matters is being flouted. I am simply unable to find out why.

I mentioned in my previous testimony in September that my guidance and direction was not being followed. I later learned that this was with the concurrence of my civilian superior. The military had sent a note to the Air Staff, the Vice Chief of Staff, saying that they could safely ignore my guidance and direction. I later learned that my civilian chief had concurred in that secret communication.

We are having similar problems on the systems acquisition reports right now. The military can ignore the guidance and direction.

Not following guidance and direction seems to be the biggest problem we have, along with the difficulty of getting access.

Senator PROXMIRE. General Skantze, how do you respond to Mr. Fitzgerald's testimony that your command is preventing him from having access to information he needs to do his job and the court has specified should be provided in the court order of June 15?

General SKANTZE. In the Air Force Systems Command, there is no prevention, either written or oral, from me to not provide Mr.

Fitzgerald any Air Force data which is available to me or any other Air Force individual.

It is quite true that when we get a request we have to go out and collect the data, and there is some time associated with that, particularly if the data needs to be formatted in any way.

But I absolutely assure you that from the day I took over the command, I made it clear that he was entitled to the information that was available to anybody else in the Air Force.

Senator **Proxmire**. Mr. Fitzgerald, what is your reaction to that response?

The General says he is doing the best he can.

Mr. **Fitzgerald**. I can't tell. If General Skantze is doing the best he can—I appreciate his saying that—somebody above him isn't because we are still having great difficulty getting information. It took us several months to get the first of several cost performance reports on the Maverick missile, which we are all interested in, because it was working its way tortuously through so-called channels. When we finally got it, the original meaning had been overtaken by events. We already had the Secretary's program review, which we wanted the information for. That did not have to be formatted or anything else.

Senator **Proxmire**. What recourse do you have? Can you go back to court?

Mr. **Fitzgerald**. I guess I could. I don't want to do that.

In testimony before Congressman Dingell on November 6, the then-Secretary of the Air Force, Mr. Orr, said that was my recourse. I am trying to avoid that.

Senator **Proxmire**. General Skantze, according to Mr. Fitzgerald, contract officials in the field wanted to implement his recommendations in 1983. On January 17, 1983, the contract officials said they could get the information Fitzgerald needed in 2 weeks.

Then the Vice Commander of the Air Force Contract Management Division told them to do nothing until asked by the Air Force Systems Command.

Doesn't this show Mr. Fitzgerald has been prevented by your command from doing his job?

General **Skantze**. I was not the commander at that point in time. I am not familiar with the circumstances, but I certainly wouldn't subscribe to anything that artificially prevented sending Air Force data to Mr. Fitzgerald.

Senator **Proxmire**. That artifically prevented sending Air Force data?

General **Skantze**. Artificially, in the sense of don't do anything until we get some direction. I think if it is available data that he has asked for, my policy is we will send it through and send it over to him.

Senator **Proxmire**. What is the reason that there has been this long delay for Mr. Fitzgerald?

General **Skantze**. I don't think there has been a long delay since I have been the commander. That is as of August 1, 1984.

Senator **Proxmire**. Do you agree with that, Mr. Fitzgerald?

Mr. **Fitzgerald**. Well, no, of course not. As I say, I can't say that the delay is all in General Skantze's organization.

We are encountering delays right now. I am being pressed by the Office of the Secretary of Defense and the Secretary of the Air Force on selected acquisition report information still in the system someplace. We don't know where it is.

We have recently, my associates and I, taken over responsibility for reports to Congress, and there is said to be incoordination and staffing. We don't know where it is. It is a terribly burdensome process.

I don't know whether the delays are occasioned by a desire not to pass on bad news or to approve the data or just what it is. We can't find out.

Senator PROXMIRE. General Skantze, according to our information, Hughes Aircraft, which is the manufacturer for several missile programs, is extremely inefficient, with standard labor hour costs two or three times greater than its competitors and in excess of the norms by an even larger factor. Hughes is averaging $600 per standard labor hour.

How do you justify paying such an exorbitant rate?

General SKANTZE. First of all, Hughes has been a great problem to us. There is no question about that.

The day after I took over the command I stopped all deliveries of missiles, and Hughes shut down, and Hughes went into a corrective action program. I have met with the chief executive officer of Hughes every month since that time. I have been out to Hughes on numerous occasions.

The first problem, as Mr. Fitzgerald pointed out, was the quality was just totally unacceptable. So one of the first things we attacked was the quality, and I am pleased to say that there was an exhaustive contractor operations review conducted by Air Force Contract Management Division about a month and a half ago. Hughes got the highest marks of anybody we have had for quality.

So I think we have improved the quality factor by an order of magnitude. But at the same time, Hughes has got to come up on efficient manufacturing. They are not there yet.

I can't directly comment on the particular number you used as cost per standard hour because I am not familiar with that number. But I want to assure you that we are putting every effort we can, now that we have Hughes in what I would call an acceptable quality status, making them into an efficient manufacturing operation.

And I would just point out for the record that the follow-on operational test evaluation of the IR Maverick missile has been extremely successful. It was a very high quality missile.

But we have much more to do with Hughes. No question.

Senator PROXMIRE. With respect to Hughes, you set up a commission to study the problem and determine who gave the order at the plant not to reject bad missiles or how the bad missiles got through the tests.

What did the commission find?

General SKANTZE. They found that the head of quality out there, who it turned out was quite ill at the time, had just not been on top of his job. As a matter of fact, he went into the hospital, had a heart operation. But we removed him from that job and brought in a new man on quality.

So I think a lot of the problems that could have surfaced were kind of masked by this individual's poor health at the time and he wasn't really on top of his job.

Senator PROXMIRE. Is it true that you denied Mr. Fitzgerald access to the commission report on Hughes and that copies of it no longer exist?

If they do exist, will you provide Mr. Fitzgerald with copies?

General SKANTZE. The corrective action program or the group that went out and looked at Hughes?

Senator PROXMIRE. The report of the commission is what I am talking about.

General SKANTZE. The commission?

Mr. FITZGERALD. The Sylvester group.

General SKANTZE. Oh, oh. Well, I would be delighted to tell you about that, and let me tell you something about that.

I have been at Air Force Systems Command for quite some time. Before I came over, I knew I was coming for some months. I decided that based on my experience that I wanted to have a group look at the organizational relationship of my Contract Management Division and my Air Force plants to the Product Divisions and the headquarters because it turns out that your acquisition efficiency is very much tied to how well the product divisions and programs work with the Contract Management Division and the specific plant reps.

Senator PROXMIRE. General, our time is getting short. So let me just ask you, will you provide Mr. Fitzgerald with a copy of the report?

General SKANTZE. Absolutely, but I need to make one point, which is very important.

I did this, and I picked out some people who I knew, who were very, very skilled and understood the business, because I wanted to get a quick survey on what the problem was and what we were going to do about it, and it did not have anything to do specifically with Hughes at that point in time.

But I suddenly found out that on September 21, 1984, Mr. Fitzgerald wrote a memo to Mr. Harshman in SAF/FM and said the following:

> We—Secretary Orr and you, Dr. Cooper and I—have been beaten to the punch by Air Force Systems Command. I had earlier heard that a group dominated by retired generals and admirals, who were previously a part of the process, have been retained to do the followup evaluation. Last week I asked Major Wolfe to make an inquiry on our behalf to find out if my information was correct and, if so, who was on the team.
>
> Major Wolfe was told and conveyed to me that there was no such formal team, that it was just a proposal. However, I received a call last night from General Sylvester, who said that he was heading up a consultant group hired by General Skantze. General Sylvester said that the Hughes matter was the trigger for the group's review, but that it had been broadened to include the activities of CMD generally.
>
> This is one of the oldest coverup dodges known to man, but still a successful one. Rather than deal specifically with well-defined problems known to us and crying for solution, the military bureaucracy is buying time by studying the problem and defusing it by expanding beyond Hughes and beyond quality control while at the same time restricting the scope to CMD alone.

I have never discussed this issue at all with Mr. Fitzgerald. I have had no contact with him. He made all those assumptions and assertions.

I asked General Sylvester to call him for the simple reason—I said to General Sylvester, before you go and look at the organizational problem with CMD I think it would be worthwhile to get Mr. Fitzgerald's views, and this is another example where my name has been used and the facts have been very much distorted.

Senator PROXMIRE. I'm going to ask Mr. Fitzgerald to respond for the record, because we have to move on.

General Skantze, is it correct that since the Tucson plant was reopened this year, the Maverick program is once again in difficulty? There are new cost overruns and schedule programs, and there's still a problem of poor workmanship?

General SKANTZE. There's not a problem in poor workmanship, but the schedule has slipped. They have not come—they're slowly coming up, but they've not come up to the contract delivery schedule.

Senator PROXMIRE. Would you comment on that, Mr. Fitzgerald?

Mr. FITZGERALD. I don't know about the quality. The only information we have is on the cost of schedule or on the cost performance reports and on the Secretary's Program Review. Those show that there are severe scheduling cost problems.

Senator PROXMIRE. What are the magnitudes?

Mr. FITZGERALD. The figures that I recall on Segment 1 of Maverick I, are that they expect a unit cost of about $750,000 per missile. I believe that's substantially above the initially expected figure. I think the ceiling of the price of the contract is something like $149 million for 200 missiles which works out to be approximately $750,000 per missile.

My recollection is that we initially intended to pay slightly over $200,000 per missile.

Senator PROXMIRE. General Skantze, in response to my information about Maverick, you say the current estimated cost to complete the program comes from Hughes, that since Maverick is a firm fixed-price contract, there is no cost performance report, and the Air Force has no independent visibility into contractor cost performance. I am puzzled by that. How many Air Force officials are present at the Tucson plant, and why don't they give you visibility of the Hughes' cost performance?

General SKANTZE. Well, we have an Air Force plant rep there, and he has a staff there. We are tracking. When I go out there, we do look at the cost performance. The initial buy, which Mr. Fitzgerald referred to, was originally going to be 490 missiles and at a firm-fixed price. A determination was made because of the state of the program that we would only buy half that number, and the costs did not come down proportionately, which is not surprising.

On the first follow-on production option, which I think is about 1,300 missiles, the first fixed price, the unit cost is about $120,000 for delivered missiles. I think you'll find if you lay out the rest of the buy, the resultant cost comes down further, but I don't want to leave the impression that we don't have a problem with Hughes getting up to efficient manufacturing and cost performance, and that's going to take time to correct. But the quality has improved dramatically.

Senator PROXMIRE. Would you give access to the data on the Maverick to Mr. Fitzgerald, so he could comment on that for the record?

General SKANTZE. Absolutely.

Senator PROXMIRE. And you'll do that promptly?

General SKANTZE. Yes.

Senator PROXMIRE. Is it correct, General Skantze, that the Air Force program manager for Maverick says that the current contract provides a ceiling price of $149 million for 200 missiles or $750,000 per missile? Yet, in your response to my request for information, you say the unit price is $222,000 per missile.

How do you explain that discrepancy? That's a discrepancy of 3 to 1.

General SKANTZE. I will have to look and see. The comment I made was related to the 1,380, which is the first or the second production buy. As I pointed out to you, the first production buy was distorted by the fact that the numbers were cut on a fixed-price contract, and because of the indirect costs and the overhead costs, although the numbers were cut in half, those costs won't decrease by one-half, so the unit price went up dramatically.

Senator PROXMIRE. Mr. Fitzgerald, do you have any information about performance, if there are any new overruns or other problems?

Mr. FITZGERALD. Yes, there appear to be continuing overruns. The cost performance reports on both the Segment 1 and Segment 2 show considerable slippage in schedule and overrun in cost.

Senator PROXMIRE. Can you straighten out the confusion as to what the unit price per missile should be, whether it should be $22,000 or $750,000?

Mr. FITZGERALD. Based on what I have seen on the charts presented by the program manager, it would apper that on Segment 1, he and the company both expect the price to be around $750,000 per missile, much, much higher than we had expected. And I might add, considerably higher than we reported to Congress.

If I may, I would like to ask my associate, Dr. Amlie, what was reported to Congress.

We apparently reported $141,000 to the Secretary. We have not reported yet to Congress.

Senator PROXMIRE. General Skantze, Hughes also builds the Amraam missile. There's been a tremendous overrun in that program.

According to a 1984 classified GAO report, early test milestones were not met and Hughes' performance has been below expectations. Total program costs were estimated at $14 billion. This represented a tripling of program cost estimates to build this program since 1978.

Would you agree that these overruns occurred and that they are partly due to problems at the Hughes plant?

General SKANTZE. The only thing we have on contract is the full-scale development. That program is capped at $556 million. At the moment, Hughes is about $67 million over that, which is coming out of their pocket. We expect that they will wind up spending $254 million out of their pocket.

We don't have a negotiated production contract at this point and all the production figures are estimated figures. We expect, after the Secretary certifies, assuming he certifies our program, that we will negotiate an option for the first lot. We have spent a great deal of time in looking at productivity to reduce costs for the missile in its production phase. That is absolutely essential. As far as how the missile is performing in the full-scale development, it is stable in its design. It is performing well. It has four successes out of four shots. We think that portion of the program is well in hand from a technical performance point of view, but we clearly have to institute the productivity enhancements to reduce the estimated cost of the missile and the production phase.

Senator **Proxmire**. General, according to the figures you gave me, the Air Force estimates an overrun on Amraam at the Hughes plant of $254 million. To what extent is this overrun due to Hughes' inefficiency?

General **Skantze**. I think the overrun has been due to Hughes' failure to see the complexity of the program. I think the reason we had to go back and make them restructure the full-scale development program and stretch it out at their cost was because we were trying to do too many things in parallel at the same time, and you simply couldn't pull it all off. It wasn't a question of not having good technical design. It was simply trying to qualify successfully on four different airplanes at the same time.

Senator **Proxmire**. Poor planning and poor management?

General **Skantze**. That's correct.

Senator **Proxmire**. General, have you ordered a should-cost review of Amraam or consulted with Mr. Fitzgerald about Hughes' problems and if not, why not?

General **Skantze**. First of all, we don't have a production contract with Amraam. We don't have a production proposal. The first proposal will be a very low rate of production. What has been done in terms of production cost estimating is to look at the productivity enhancements that we think have the payoff to reduce the cost of the missile and work not only at Hughes, but Raytheon, as the second contractor, into the productivity enhancements. And in answer to whether Mr. Fitzgerald was consulted, I believe, at least in several meetings Mr. Amlie was present.

Senator **Proxmire**. Do you think they should talk when they make the production proposal?

General **Skantze**. Absolutely.

Mr. **Fitzgerald**. Mr. Vice Chairman, I have with me, Dr. Amlie, who has been working on that, and I think he might have a word of insight on the outlook for the program.

Senator **Proxmire**. Go right ahead. We're short on time, so make it quick.

Mr. **Amlie**. Thank you, Mr. Vice Chairman.

I have here some documents. I'm not going to inflict them on you. this is a list of very part in the Amraam and the work associated with it. Hughes has done this. It has got some mistakes in it. They've corrected them. The point is——

Senator PROXMIRE. What you're holding is a document that looks as if it's several hundred pages.

Mr. AMLIE. It is, sir. You can't put a direction on anything without doing this. Similarly, Raytheon has done a magnificient job of going through the Amraam design before they even bid, doing the work measurements. And of course, the building materials. They have to know what it's going to cost to make it, before they did. So both these contractors, I think, are doing an excellent job on work measurement.

Mr. Fitzgerald wanted me to point out a minor scam that's going on. We identified the cost problem about 2 years ago, and our Assistant Secretary Cooper did some artful bookkeeping and found $100 million to fix these problems. The problem is something called Value Engineering Change Proposals. The contractors know it has to be done to simplify the design, to make it much cheaper without impairing the performance. The problem is, they want to do it themselves, because then if they have a value engineering change proposal, they could keep half the money they would change be these proposals in perpetuity.

Senator PROXMIRE. Mr. Fitzgerald, would you tell us what the unit and program costs are likely to be, if Hughes gets the production contract?

Mr. FITZGERALD. Just on the extent of the information available to it, if we assume we can't do a should cost in development, as it was done on the chart on your left there, we certainly could do a should cost. I would guess that based on what Dr. Amlie has told me, that it's likely to run $700,000 per missile at Hughes, but I'd rather it wouldn't, and we think there are things that can be done to head that off.

Unfortunately, I don't believe—and Dr. Amlie can correct me—that his recommendations on simplification have yet been put in force. It appears that the contractors are holding back, waiting to cash in once they get the contract. We're hoping we can head that off.

Senator PROXMIRE. That $700,000 per missile would be what, $17 billion for the missile cost?

Mr. AMLIE. Yes; about.

Mr. Vice Chairman, I want to say also, at Raytheon, it would be a great deal less. Raytheon is one of the most efficient quantity and quality aerospace type producers we have, and my estimate would be that at Raytheon, it will be about $400,000.

Senator PROXMIRE. Raytheon would be $400,000, so that would be a saving of almost half.

Mr. AMLIE. Yes, sir; they're very efficient.

Senator PROXMIRE. How can should-cost principles deal with situations such as this one, Mr. Fitzgerald?

Mr. FITZGERALD. Let's take a look, for example, at the chart we were discussing before. There's no reason under the Sun that we could not be doing something about the Hughes overhead rate right now or their other direct charges or resurrect some of our other direct charges, meaning those costs for sustaining engineering, production engineering, that sort of thing, all of which will be apportioned to whatever new work goes into the plant.

If we don't get control of that now, we're going to be stuck with it. Early on, after my return from the outer darkness, we tried to push a program that Secretary of the Air Force Orr wanted to push to do something about the runaway escalation of executive pay and compensation. We could revive that. That's dead now. That's dead as a hammer, as far as we can tell. But it could be revived.

All of the cost elements lines that we've talked about could be attacked right now. We don't need to wait until the production contract is signed.

Senator **Proxmire**. General Skantze, I asked for information about the Phoenix missile as well as Maverick. You said in your response that Phoenix is a Navy program and you do not have the cost and performance data about it. Isn't it correct that the Air Force has cognizance of the Hughes plant in Tucson where it's being produced, that there are more than 100 Air Force representatives at that plant, that they work for the Air Force Contract Management Division headed by General Bernard Weiss, who reports to you?

General **Skantze**. Yes, but they're still Navy programs. The protocol says we should go to them, which we have, as of this morning. I think the information was delivered by the Navy and by the Army.

Senator **Proxmire**. We haven't received anything here.

General **Skantze**. I think it arrived this morning.

Senator **Proxmire**. It's rather late, and especially the fact that it's now 10 minutes to 12.

General **Skantze**. You know, it's very clear that the protocol says we had to go through them, and I wrote them immediately, in fact, called them, and they said they would move it as fast as they could.

Senator **Proxmire**. General, don't the Air Force representatives in the Tucson plant monitor performance of Phoenix, including costs and schedules and improved progress payments? And in view of all of this, Air Force management of the Phoenix contract, doesn't the Air Force Systems Command have access to the information I requested?

General **Skantze**. We have access to the information, but it's still the protocol to go to the Navy and ask them to release it.

Senator **Proxmire**. Isn't it correct that each of the Phoenix contracts, of which there are three, are experiencing overruns and delays, as the charts being displayed show?

General **Skantze**. I think from a schedule standpoint, they're behind, as is the Maverick.

Senator **Proxmire**. From the overrun standpoint, you can't tell us?

General **Skantze**. I can supply the information as I understand it, but I don't have it with me.

Senator **Proxmire**. Mr. Fitzgerald, can you add anything to what we know about the Phoenix missile, and what the charts we have displayed indicate about Hughes' performance?

Mr. **Fitzgerald**. We continue to hear rumblings about quality problems on the Phoenix, but I can't verify them here this morning. The charts you've displayed showing the growth and contract price to keep ahead of the incurred cost is, unfortunately, not unique to the Navy. We have similar charts in the Air Force, I'm sorry to say. One of the more dramatic ones being so-called "stairstep charts" that our industrial engineer, Mr. Chehan, has constructed on Maverick. It's a phenomenon we see all the time. The contract changes given frequently to cover increased incurred costs.

Senator **Proxmire**. Mr. Fitzgerald, can you explain that to us? What significance is there, if the contract price goes up and the incurred costs go up?

Mr. **Fitzgerald**. Oftentimes, there are legitimate changes that cause the contract price to go up, but just as often, those changes are overpriced, insignificant or sometimes even changed that might detract from what we're getting.

Senator **Proxmire**. Is that a note in fixed-price contracts?

Mr. **Fitzgerald**. Yes, sir. We call them the trade contract nourishment. It's been around for a long time. It wasn't invented recently.

Senator **Proxmire**. Those are fixed prices that float upward?

Mr. **Fitzgerald**. Nothing fixed about them. They do float upward; yes, sir. The Navy, I believe, is somewhat worse in the regard than we. Their practice, in the past at least has often been to let an undefinitized or letter contract and keep amending the letter contract as the contract costs incurred rise, and then definitize only after a large percentage of the money is spent.

Senator **Proxmire**. General, do you have any concluding comments you'd like to make?

General **Skantze**. Yes; I think, with respect to a couple of things Mr. Fitzgerald has stated. You know, we hire typists on the basis of their being able to do 40 words a minute when they come in. You will find that in our contractors, who have what I would call piece part kind of standard work, like General Electric, like Pratt & Whtney, you will find that they achieve work measurement standards very rapidly, because of the simple nature of what they're doing, and their indexes are very good.

The nature of our business is such that is you look at, for example, a B–1B, and the fabrication portion of that in numbers of hours is dwarfed by the integration assembly and tests. This is true of a lot of our avionics systems, where care has to be taken because of the nature of the high technology. For example, if you're using flat pack wafers on ceramics which you haven't seen before, there is a lot of care that goes into that process of learning how to do it.

So the example of manufacturing that Mr. Fitzgerald used, while correct, is only an example of operator efficiency with what is relatively a simple task. Our real problem is to look at total factory efficiency. And the assembly and test process that goes into it can dwarf the number of hours you've actually spent manufacturing it. So we're trying to attack all problems across the board.

The point is, I'm committed to doing that and I appreciate the opportunity to be here, I can assure you. I was very upset by some of the remarks Mr. Fitzgerald made on September 6, with relationship to me, saying I was trying to hide things from the public and it was costing billions of dollars.

I am not in the habit of going out and making assertive statements about people I don't even know. And so I appreciate the opportunity of coming in and putting on the record what I've actually done.

Thank you, Mr. Vice Chairman.

Senator **PROXMIRE**. Mr. Fitzgerald, for the record, would you give us your written comment on the effect of complexity and short production runs on cost?

Mr. **FITZGERALD**. Sure, and if I might, I would like to state specifically, since I haven't done that, the change of definition that I mentioned in my September 6 testimony. The military standard definition of a standard time is as follows, which I'll read:

> Touch labor/standard time. Normal time is the time required by a qualified worker to perform a task at a normal pace to complete an element cycle or operation, using a prescribed method:

It goes on to say:

> Personal fatigue and unavoidable delayed allowance, added to this normal time, result in the standard time.

That's the definition. General Skantze's definition is that labor time standard represents the time a particular task could take a trained worker—and here's where he changes the definition—during mature production, instead of using a prescribed method. You see, the method changes, as I've illustrated in the example. And this provides the excuse for not making normal output on work.

He goes on to quote later on former Secretary of the Air Force Orr, saying that:

> Rigid engineering time standards would require contractors to develop, are based on mature stable production.

That's just not true. We have instructed the field repeatedly—I don't know whether they are following it or not—that they should have the time standard that should take time to reflect the way the work is being done now.

And just one brief comment on compexity. Even the most complex job resolves itself into simple elements of work, and that's what I was trying to present with the tutorial.

The main problem we have is attitude. We need to reject the notion that actual costs are good costs. If we do that, I think General Skantze and I are on the same wavelength.

Senator **PROXMIRE**. Gentlemen, let me just make a brief closing statement.

I'm not sure if the Pentagon realizes it yet, but a new order of fiscal austerity began when President Reagan signed the Gramm-Rudman-Hollings bill. The future may be especially austere for the military. Instead of a future buildup, fueled by large dollar increases, the military will have to make due with fewer resources. This will be true for weapons acquisitions, as well as other components of the defense budget.

We now have all the weapons and services the Air Force says were necessary. We must reduce their cost. Simple arithmetic says that unless costs are driven down, we will have to eliminate weapons.

For the first time in many years, the Pentagon's own self-interest dictates high efficiency in defense production. They can have business as usual and fewer weapons, or they can drive down costs and maintain current levels of production.

You can't have both.

General Skantze, meet with Mr. Fitzgerald. Thank you.

[Whereupon, at 12 noon, the subcommittee adjourned, subject to the call of the Chair.]

DEFENSE ECONOMICS ISSUES

FRIDAY, JULY 18, 1986

CONGRESS OF THE UNITED STATES, SUBCOMMITTEE ON ECONOMIC RESOURCES, COMPETITIVENESS, AND SECURITY ECONOMICS OF THE JOINT ECONOMIC COMMITTEE,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:35 a.m., in room SD–562, Dirksen Senate Office Building, Hon. William Proxmire (vice chairman of the subcommittee) presiding.

Present: Senators Proxmire and Mattingly.

Also present: Richard F Kaufman, general counsel.

OPENING STATEMENT OF SENATOR PROXMIRE, VICE CHAIRMAN

Senator PROXMIRE. The subcommittee will come to order.

The subject of today's hearing, defense inflation, may sound like an exercise in dry-as-dust economics. In truth, certain economic principles and standards for estimating inflation will be discussed. But this is an area where billions of dollars can be saved without cutting 1 ounce of military muscle. Congressional appropriations could have been reduced by $7 to $9 billion in each of the past 5 years has more care been exercised in predicting future inflation. Additional savings could have been achieved had past inflation been correctly measured.

When the Defense Department asks Congress for money in its annual budget, its request includes an amount for inflation. This requires a forecast of next year's inflation rate. If the forecast is too high by just 1 percentage point, it would receive about $3 billion in appropriations more than required to offset the effects of inflation. That is more than dust. In fact, the Pentagon's erroneous inflation forecasts have produced even greater excess appropriations for defense inflation.

At the end of the year, the Defense Department measures how much inflation actually occurred. If the measurement is incorrect, the amount reportedly spent for inflation will be incorrect, and the reported amount of real defense spending will be incorrect. It would be possible, with more accurate measurements of past inflation, to get the same amount of real defense spending with significantly smaller defense budgets.

It has already been established that the Pentagon's inflation forecasts over the past several years were in error. GAO estimates that, for the 5-year period fiscal year 1982 through 1986, the Pentagon received $44.5 billion in excess inflation funds. The Pentagon estimates that, for the same period, it received $35.9 billion in excess inflation funds. GAO says that it is unable to determine how all of the excess funds have been used. The Pentagon disputes that.

One question that needs to be answered is whether the misforecasts of the past were honest mistakes or done intentionally. Did the Defense Department intentionally overestimate inflation so as to extract excessive appropriations from Congress? The Defense Department argues that it did not realize how successful the administration would be in driving inflation down.

A second question is whether the Defense Department is incorrectly measuring past inflation. The Defense Department uses the defense deflator to measure defense inflation, but some argue that this is a misuse of the defense deflator.

The main objective must be to come up with a way to prevent the mistakes that have been revealed from recurring. Everyone agrees that the forecasts of inflation were too high.

My staff and Senator Pryor's staff have discussed with the General Accounting Office a legislative approach that would do three things:

One. Require a breakdown of the inflation amounts requested in the defense budget proposal.

Two. Limit the amount the Pentagon can spend for inflation to actual inflation in the economy, and place restrictions on appropriations for inflation so they cannot be used for other purposes.

Three. Require the Secretary of Defense to report annually on how inflation funds were spent, following which GAO would do an audit and report to Congress on whether the inflation funds used are reconciled to the actual inflation experienced.

A copy of the draft legislation is attached to this statement.

[A copy of the draft legislation follows:]

DRAFT LEGISLATION TO END INFLATION DIVIDENDS IN THE DEPARTMENT OF DEFENSE

Features of the Proposed Legislation

This draft legislation offers a three pronged approach to ending the inflation dividends currently being experienced in the Department of Defense. It covers three critical areas: getting information on the amounts thought to be needed to offset anticipated inflation; controlling the expenditure of funds provided for inflation; and tracking/reporting on those expenditures.

To obtain more information about how much the Department estimates it will need to compensate for the effects of inflation over the life of its appropriations, the first part of the proposal is an amendment to the Congressional Budget Act of 1974. Without dictating in any way to the DOD how much it should request for inflation or what indices it should use to measure inflation, the proposal would require the Department to set out separate inflation estimates in each account. For the SAR systems, inflation estimates are to be provided system-by-system. This part of the proposal is preliminary and should be enacted at the earliest possible date. Alternatives means of obtaining the same information are discussed in footnote 2, below.

To control expenditures, the proposal suggests earmarking whatever funds are requested for inflation within each defense function account. This insures that the portion of the appropriation that is designated as an inflation allowance cannot be used to buy more program. For most practical purposes, earmarking would put a lid on the amount of funds that may be used to offset inflation. Supplemental appropriations would be required to increase inflation funds available for obligation, although program funds could be used for extra inflation to the extent they are available. Reprogramming of inflation allowances within the same appropriation would be available on the same terms and conditions as now exist, but authority to transfer inflation funds between accounts (and between SAR systems within the same account, if the SARs are itemized in the appropriation act) would have to be obtained from Congress. An additional control device would limit overall expenditures for inflation across all defense function accounts to the rate of inflation evidenced by the GNP deflator for the general economy. These provisions are designed to be a part of the Defense appropriation act passed in the first fiscal year after the Budget provisions become effective.

To account for the use of inflation funds, the proposal contains three provisions. The first is prospective, and should be enacted now. It requires the Secretary of Defense to design a new system to track the inflation funds that will be separately appropriated in the future. Secondly, as a part of the appropriation act that appropriates inflation funds, the proposal would require the Secretary to report to the Congress at the end of the fiscal year on the difference between the amount of the inflation allowance and the amount used for inflation. Also, the proposal would require the Secretary to cooperate fully in the audit of inflation funds by the Comptroller General.

The main thrust of the proposal is to eliminate the inflation dividend in the Department of Defense. However, if the Congressional Budget Act of 1974 is amended as recommended, it would apply to the defense function accounts, including the atomic energy defense activities account managed by the Department of Energy. Accordingly, the control and reporting elements of the proposal could easily be expanded to cover these additional activities. Corresponding parallel provisions would have to be included in DOE appropriation acts to effectuate this intent.

Proposed Legislation

1. Items for Immediate Enactment -- Find an appropriate vehicle at the earliest possible date 1/ to enact the following two provisions:

A. Amendment to the Congressional Budget Act of 1974 2/

Section 1105 (a) of title 31, United States Code is amended by adding the following new subsection:

"(26) for each defense function account, a separate statement of the amount requested to offset anticipated inflation in that account (except those funds requested for pay

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1/ If enacted before December 1986, the provision could be applicable to the Budget for FY 1988.

2/ Alternative methods exist to obtain detailed information on inflation estimates without amending the Budget Act. The Appropriations Committee could request that DOD provide separate inflation estimates either as a part of its submission of budget justifications, or for the record at its annual appropriation hearings.

and retirement and the acquisition of foreign currency), over the life of the appropriation--

(A) in the account as a whole, and

(B) in the case of any account that includes an amount for a major defense acquisition program as that term is used in section 139a of title 10, for each such program. 3/

B. Amendment to the 1986 Supplemental Appropriations Act or Other Appropriate Legislation

"Not later than 180 days after the enactment of this Act, the Secretary of Defense shall submit to the Congress and to the Comptroller General for review, a plan designed to report and reconcile:

"(a) Amounts separately appropriated as inflation allowances with

"(b) amounts expended by the Department to offset inflation, as measured by economy wide inflation indices."

2. Items for Inclusion in Future Appropriation Acts -- Use the information in the Budget to segregate DOD appropriations into program needs and estimated inflation.

A. Earmark Language: To appropriate for the inflation segment of each account, the following language is suggested:

". . ., $_________, including an inflation allowance of $_________."

For major weapons systems accounts, set out the inflation earmarks separately for each system in the act itself. If this is too cumbersome, put the system-by-system details in the Committee Report and incorporate the Report by reference. Reprogramming of the inflation allowances between SAR systems within the same appropriation account can be permitted or restricted, as the Committee chooses. Creating a "line item" for the inflation in each system by individually earmarking the inflation allowance in the appropriation act would, in the normal course of things, prohibit such reprogramming.

3/ Section 139a requires the Selected Acquisition Reports (SARs).

B. General Provisions

"Sec. *** Not later than 60 days after the end of the fiscal year, the Secretary shall submit a report setting out the inflation index or indices used to determine the inflation rates that apply to each defense function account for which inflation is appropriated separately, and specifically detailing the amount of program and inflation funds actually expended during the previous year in each account. For major defense acquisition programs, as that term is used in section 139a of title 10, the report shall provide this information on a program-by-program basis."

"Sec. *** Amounts appropriated by this Act as inflation allowances may be used only to finance future inflation in the cost of the programs, projects and activities for which those allowances are provided. In any fiscal year, the total aggregate outlays of appropriations provided as inflation allowances by this Act may not exceed the amount necessary to offset the effect of inflation on the amounts outlayed for the programs, projects and activities for which there is an inflation allowance, as determined by the GNP deflator."

"Sec. *** The Secretary shall cooperate fully in periodic audits of separately appropriated inflation funds by the Comptroller General, who shall report whether the actual expenditure of the inflation allowances conforms to the requirements of sections *** and *** of this Act."

Senator Proximire. We have an excellent panel or policymakers and technical experts to help us gain insights into defense inflation and to respond to the questions I have raised.

Our first witness will be my distinguished colleague, Senator David Pryor, who has been a leader in the Senate on this issue and one of the most constructive voices in the congressional dialog about defense inflation.

He will be followed by Charles Bowsher, Comptroller General; Richard Zeimer of the Bureau of Economic Analysis; and Robert W. Helm, Assistant Secretary of Defense.

Senator Mattingly, go right ahead.

OPENING STATEMENT OF SENATOR MATTINGLY

Senator Mattingly. Thank you, Mr. Vice Chairman, for your kind recognition.

I believe that today's hearing can yield some useful information about the inflation budgeting system of the Department of Defense. I know that our distinguished colleague, Senator Pryor, has been particularly diligent in the efforts that are being made to ensure that there is a proper accounting of the money that has been provided as inflation funding in the DOD budget.

In one sense, it's sort of a nice problem to have. It wasn't too long ago when the rate of inflation was going up so much that Congress certainly didn't have to wrestle with the question of what DOD did with the appropriation because inflation was below expectation. But nonetheless, I think it is important to ensure that there are procedures to track and account for DOD funds.

I notice that Mr. Bowsher in his prepared testimony said that the DOD accounting systems that track how funds are being used are not directly linked to the budgeting process. That's not the first time I have heard that. I don't think it's the first time that Senator Pryor has heard of the problem either.

I first discovered it during my efforts to determine exactly how much money the DOD was spending on consultants and studies. That is a problem that both Senator Pryor and I have been trying to resolve.

With all that said, however, I believe that we are kidding ourselves if we think there's some enormous amount of hidden money, unused money, being tucked away in some Pentagon nook or cranny. Defense is very expensive and it's going to be so, but there's no doubt that some tighter controls on DOD accounting procedures would lead to better management of the truly huge sums that have been appropriated for national security.

Thank you, Mr. Vice Chairman.

Senator Proxmire. Thank you, Senator Mattingly.

Senator Pryor, go right ahead, sir.

STATEMENT OF HON. DAVID PRYOR, A U.S. SENATOR FROM THE STATE OF ARKANSAS

Senator Pryor. Thank you, Mr. Vice Chairman, and thank you, Senator Mattingly, and I would like to express my appreciation for the invitation to testify at this hearing. I have a very short statement.

With your subcommittee's attention on the Defense Department's inflation windfall, I have hope finally that Congress can now do something about it. Up to now we have done nothing, Mr. Vice Chairman. This is proving expensive to the taxpayer.

The GAO has told us the entire inflation windfall has cost or amounted to some $44 billion. Those are $44 billion predicted for inflation that never occurred.

Just during this past recess, the Department of Defense notified the Senate Armed Services Committee that it has found another $4.7 billion left over almost certainly from that $44 billion pool.

I welcome the focus of this hearing. And now how to solve the problem? We should not think this problem is complicated. In fact, it is really quite simple.

The Pentagon has cooked the inflation books to give itself a gigantic slush fund. Then the Congress cooperated. We allowed a big portion of the windfall to be used up through something called reprogramming and transfers. The problem is going to continue if we do not insist on effective new budgeting and spending procedures in both the Pentagon and in the Congress.

One of the ways that we in Congress have been allowing the inflation windfall to be spent by DOD is through the $29 billion we allowed to be reprogrammed.

How did this money get spent, Mr. Vice Chairman? The procedures are very, very interesting. In the Defense Department there are written regulations for approval, but in the Congress there are none. The various committees that approve Defense Department reprogramming each has its own different set of informal procedures. Only one committee in the Congress bothers to have any regular hearings on this matter. Many times, some committee members are not consulted. Other times, the review is very cursory. Sometimes the approval for reprogramming is communicated over the telephone and decisions involving the expenditures of millions and millions of dollars are reprogrammed simply by a telephone call.

From 1981 to 1985, over $14 billion in reprogrammings were never approved by the Congress at all and we were notified about this $14 billion in new expenditures only after the fact.

Several months ago I asked the GAO to study reprogramming and the report was just finished this week, Mr. Vice Chairman, and it is the first comprehensive study of reprogramming ever conducted and I am releasing it to the public at this hearing. I have a copy of it in my hand. It is dated July 16, so it is hot off the press and I think the figures are very, very interesting.

They indicate to me that DOD is also not the only part of our government that could use a little or even a lot of reform in this area. But we are not alone in using questionable procedures.

I also asked the GAO to look into something in the Defense Department called the foreign currency fluctuations account. This special revolving fund is used to offset changes in the value of the dollar for defense purchases in foreign countries.

What the GAO found was, from 1981 to 1985, DOD "was able to retain the use of $659.7 million of funds that appropriately should have been returned to the Treasury and, in effect, circumvented a congressionally imposed ceiling on the foreign currency account."

This GAO study, Mr. Vice Chairman, is also brand new. I am releasing it to the subcommittee and to the public at this meeting this morning.

[The General Accounting Office reports follow:]

United States General Accounting Office

GAO

Briefing Report to the Honorable
David Pryor
United States Senate

July 1986

BUDGET REPROGRAMMING

Department of Defense Process for Reprogramming Funds

GAO United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-223474

July 16, 1986

The Honorable David Pryor
United States Senate

Dear Senator Pryor:

In response to your request, we have reviewed the reprogramming[1] process for the Department of Defense (DOD) budget. We have provided a description of this process concentrating on the activities of DOD and the Congress. To a limited extent, we reviewed the reprogramming process at several civilian agencies to compare their procedures for reprogramming with DOD's procedures. For DOD, we examined reprogramming activities involving funds appropriated in the annual Defense Appropriations Acts. Within the Congress, we focused on the involvement of the House and Senate Committees on Appropriations and on Armed Services in reviewing DOD reprogramming actions. You also asked us several specific questions about the congressional review process, such as how many members serve on the responsible committees and whether there is a mechanism for noncommittee members to review reprogramming actions.

Our review showed that:

-- Reprogramming is a cumbersome process within both DOD and the Congress because of the many levels of review and the wide variety of congressional committee review procedures. Some DOD officials and congressional staff said that the degree of difficulty serves to ensure that those reprogramming requests that are submitted are the highest priority items for DOD. (See apps. I and III.)

-- Reprogramming is a cooperative effort between DOD and the congressional committees. (See apps. I and III.)

-- Participants in the reprogramming process within both the congressional committees and DOD believe that reprogramming is necessary given the long lead times involved in preparing the annual budget and the size and complexity of the Defense budget. Moreover, congressional staff members view the reprogramming review process as an important oversight tool. (See apps. I and III.)

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[1] Reprogramming is the use of funds for purposes other than those originally contemplated at the time of appropriation.

-- According to key congressional committee staff members, there is no mechanism to obtain the views of or to disseminate information to Members of Congress who are not on the committees reviewing the reprogramming actions. The staff members expressed a variety of views about whether such a process is needed. (See app. III.)

-- Civilian agencies also reprogram funds. However, their procedures, requirements, and processes are different from those of DOD. (See app. IV.)

We also found that DOD and the services have directives, instructions, and regulations governing the reprogramming process. These include definitions of reprogramming, allowable congressional limits, and detailed descriptions of the paperwork involved. Each service has definitive paperflow guidelines for requests, as does the Office of the Secretary of Defense, which reviews the requests before they are submitted for congressional review. (See app. I.) In turn, the congressional committees have their own procedures and paperflow processes, although they are not written in the form of rules or regulations. (See app. III.)

On February 28, 1986, we briefed your staff on the volume of reprogrammings in the defense budgets during fiscal years 1981 through 1985. For the five fiscal years that we examined, the Defense Appropriations Acts provided about $1,067 billion. Of those funds, DOD reprogrammed about $29 billion, or about 2.7 percent. (See app. II for statistics on the volume of reprogramming.)

In conducting our review, we met with officials from the Departments of Defense, the Air Force, the Army, and the Navy; the General Services Administration; the National Aeronautics and Space Administration; the U.S. Department of Agriculture; the Department of Housing and Urban Development; and the Office of Management and Budget. We also met with staff members from the House and Senate Committees on Appropriations and on Armed Services. We reviewed applicable laws, directives, instructions, and regulations for DOD. Our review efforts at the civilian agencies were limited and conducted to provide a perspective of the processes used by other agencies. We did not examine the process as it applies to funds appropriated annually in the Military Construction Act because these funds are handled under separate processes both within DOD and the Congress. Our work was performed from December 1985 to May 1986 in accordance with generally accepted government auditing standards.

As agreed with your office, we did not obtain official agency comments on this report. However, the views of officials were sought during our work and have been incorporated in the report where appropriate. We plan no further distribution of this report until 30 days after its issue date unless you publicly announce its contents earlier. At that time, we will send copies to the House and Senate Committees on Appropriations and on Armed Services; the Secretary of Defense; the Director, Office of Management and Budget; and other interested parties on request.

If we can be of further assistance, please contact me on 275-4268.

Sincerely yours,

Harry R. Finley

Harry R. Finley
Senior Associate Director

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ABBREVIATIONS

DOD	Department of Defense
GAO	General Accounting Office
GSA	General Services Administration
HUD	Department of Housing and Urban Development
NASA	National Aeronautics and Space Administration
O&M	Operation and Maintenance
OMB	Office of Management and Budget
RDT&E	Research, Development, Test, and Evaluation
USDA	U.S. Department of Agriculture

THE REPROGRAMMING PROCESS AT DOD

Reprogramming is the use of funds for purposes other than those originally contemplated by the Congress at the time of appropriation. DOD's reprogramming guidance, developed in consultation with the pertinent congressional committees, stipulates that requests for reprogramming of funds shall not be presented to the Congress except for higher priority items based on unforeseen military requirements. Reprogramming actions do not represent requests for additional funds from the Congress. Rather, they normally involve the reapplication of resources. A reprogramming action can, however, involve an increase of quantities to be procured without necessarily entailing any movement of funds.

Although they are related and often discussed as the same concept, reprogramming of funds is distinguishable from transfer of funds. Reprogramming, in general, is the shifting of funds from one item within an appropriation to another; generally, transfers are the shifting of funds between appropriation accounts. Thus, if an agency receives a lump-sum appropriation for Operation and Maintenance (O&M) and another for Personnel, a shifting of funds from O&M to Personnel is a transfer, while a shifting of funds from one project to another within the Personnel account is reprogramming. Reprogramming is a nonstatutory arrangement, in that no general statutory provision either authorizes or prohibits it. It has evolved largely in the form of informal agreements between various agencies and congressional committees. Transfers, however, are prohibited without statutory authority and the Congress has provided DOD annually with such authority.

In some cases, the Congress directs DOD to fund particular programs or aspects of line items through reprogramming or transfer actions. For example, in 1983, at the direction of the Congress, DOD transferred $31 million to the Defense Agencies, O&M appropriation from several projects in the Air Force Aircraft Procurement appropriation. These monies were used to fund a pay raise.

Another aspect of any reprogramming action is identifying the source of funds to be moved. Officials said that this identification process can create controversy within the services because it is sometimes necessary to arbitrarily take funds from one program for a higher priority need.

Transfers

Transferring funds between appropriation accounts is prohibited without statutory authority. Some agencies have limited transfer authority which commonly sets a percentage limit on the amount that may be transferred from a given appropriation and/or the amount by which the receiving appropriation may be augmented.

Congress provides DOD general transfer authority annually in appropriations acts. Section 8020 of the DOD Appropriations Act, 1986, for example, grants the general authority and limits the amount that can be transferred between DOD appropriations or funds available for military functions (except military construction) to $950 million. This section reads:

> "Upon determination by the Secretary of Defense that such action is necessary in the national interest, he may, with the approval of the Office of Management and Budget, transfer not to exceed $950,000,000 of working capital funds of the Department of Defense or funds made available in this Act to the Department of Defense for military functions (except military construction) between such appropriations or funds or any subdivision thereof, to be merged with and to be available for the same purposes, and for the same time period, as the appropriation or fund to which transferred: Provided, That such authority to transfer may not be used unless for higher priority items, based on unforeseen military requirements, than those for which originally appropriated and in no case where the item for which funds are requested has been denied by Congress: Provided further, That the Secretary of Defense shall notify the Congress promptly of all transfers made pursuant to this authority."

In addition, according to congressional testimony of the Deputy Secretary of Defense, although a transfer usually involves movement of funds between appropriation accounts, in certain appropriation accounts, where the Congress has enacted legal subdivisions of funds, transfer authority is involved in the movement of funds between budget activities of subdivisions of the same appropriation account. For example, some of these appropriation accounts with subdivisions of funds are: Missile

Procurement, Army; Weapons Procurement, Navy; Other Procurement, Navy; and Shipbuilding and Conversion, Navy.

Reprogramming

During congressional testimony, the Deputy Secretary of Defense stated that reprogramming actions are authorized for all of the appropriation accounts in the annual DOD Appropriations Act; that is, Military Personnel, O&M, Procurement, and Research and Development. According to the DOD directive on reprogramming, there are four types of reprogrammings.

1. Congressional Prior Approval Reprogrammings occur when DOD increases a congressionally approved procurement quantity for certain weapon systems, or involves items which are known to be or have been designated as matters of special interest to one or more committees, regardless of the dollar amount. Additionally, when DOD uses its general transfer authority to fund a program, the directive requires the military departments to follow the procedures outlined therein. Congressional prior approval reprogrammings require approval by the Secretary or Deputy Secretary of Defense.

2. Congressional Notification Reprogrammings are initiated when the reprogrammings will exceed established dollar thresholds for the various appropriation accounts or would initiate new programs or line items which would result in significant follow-on costs. They require approval by the Secretary or Deputy Secretary of Defense.

3. Internal Reprogrammings are accounting actions for realigning or reclassifying dollar amounts within or between appropriation accounts. These actions do not involve changes from the purposes and amounts justified in the budget presentations to the Congress. They require approval by the Assistant Secretary of Defense (Comptroller) and provide audit trail information to the congressional committees.

4. Below-Threshold Reprogrammings are those that do not meet the criteria for prior approval or notification. These actions do not require approval by the Secretary or Deputy Secretary of Defense and are handled within the individual service. Congressional oversight of these reprogramming actions is through DOD's semiannual submission of report DD 1416, "Report of Programs," which contains cumulative below-threshold actions for each line item. For below-threshold reprogrammings which would initiate new programs that are less than the amount requiring a notification reprogramming, advance notification is made by letter to the congressional committees.

DOD GUIDANCE ON REPROGRAMMING

DOD has two documents which provide official guidance on reprogramming. They are DOD Directive 7250.5 entitled "Reprograming of Appropriated Funds," dated January 9, 1980, and DOD Instruction 7250.10 entitled "Implementation of Reprograming of Appropriated Funds," dated January 10, 1980. The directive states the policies of DOD with respect to reprogramming proposals and actions relating to the appropriation accounts covered by the DOD Appropriations Act. The instruction explains how to implement those policies, covering the various reprogramming actions, forms, and procedures.

The congressional committees involved in reviewing DOD reprogramming actions, in conjunction with DOD, have established criteria which stipulate the conditions under which either congressional prior approval or notification are required. The criteria determine the extent of approval needed for the reprogramming of funds.

Criteria for prior approval

DOD is required to obtain prior approval from the congressional committees when the reprogramming request, irrespective of the amount:

--Uses the general transfer authority. (See discussion on congressional prior approval reprogramming on the previous page.)

--Increases the procurement quantity of a specific

--aircraft and related support equipment,

--missile and related support equipment,

--naval vessel and related support equipment,

--tracked combat vehicle and related support equipment,

--torpedo and related support equipment, or

--other weapon and related support equipment.

--Affects an item that is known to be or has been designated as an item which is of special interest to one or more of the congressional committees.

Criteria for notification

DOD is required to notify the congressional committees when the reprogramming request would initiate new programs or line items which will result in significant follow-on costs or when the request affects the following appropriation accounts by the indicated amounts. (See glossary for definitions of budget activity, line items, and program element.)

Figure I.1: Criteria for Notification by Appropriation Account

Appropriation account	Criteria
Military Personnel	Increases a budget activity by $10 million or more
Operation & Maintenance	Increases a budget activity by $5 million or more
Procurement	Increases an existing line item by $10 million or more
	Adds a line item of $2 million or more
Research, Development, Test, & Evaluation (RDT&E)	Increases an existing program element in an account by $4 million or more
	Adds a new program of $2 million or more
	Adds a new program estimated to cost $10 million or more within a 3-year period

SERVICE INSTRUCTIONS AND REGULATIONS

Each service has its own directives and regulations which implement the DOD guidance on reprogramming. The directives and regulations are all similar in degree of detail and description and each contains the DOD directive and instruction on reprogramming.

Figure I.2: Service Regulations

Service	Regulation
Air Force	HQ Operating Instruction 172-6, "Reprograming of Appropriated Funds," April 24, 1981
Army	"Reprograming Action Directive," December 1984
Navy	NAVCOMPT Instruction 7133.1C, "Procedures and reporting requirements related to the reprograming of appropriated funds," May 8, 1980

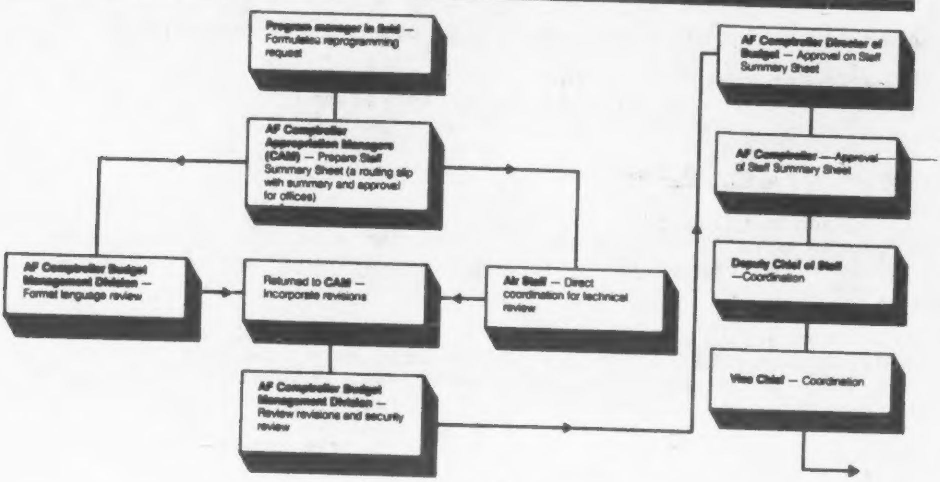
THE PAPERFLOW PROCESS

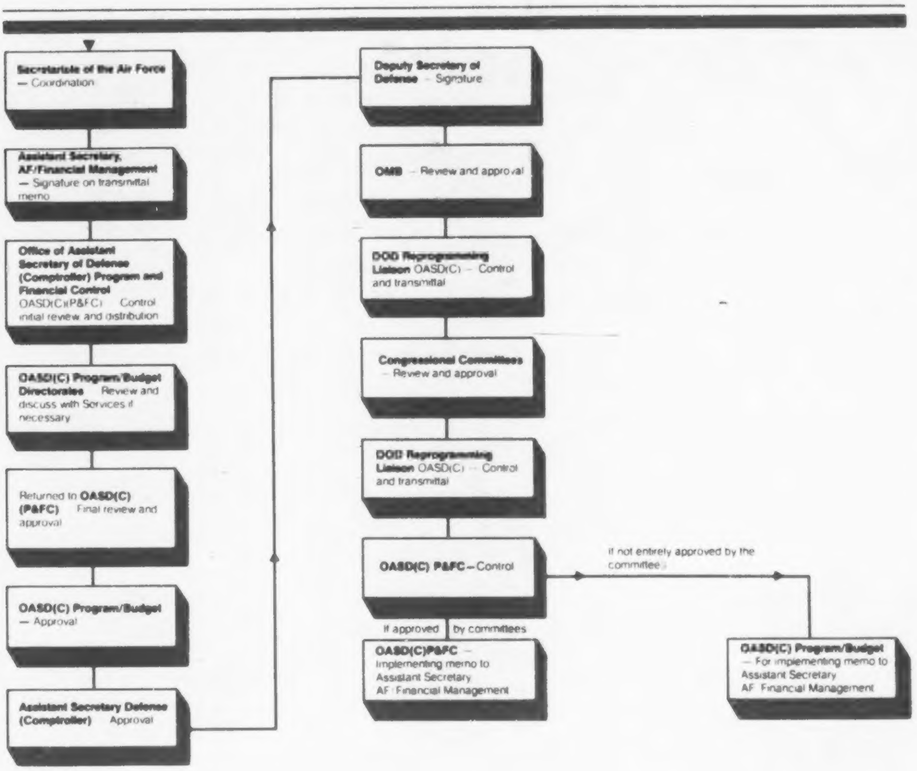
Each service reported that the paperwork for reprogramming requests normally flows from the program managers or base level managers up through the individual service with several review points.

Figure I.3 illustrates how a reprogramming request would flow through the Air Force, to the Office of the Secretary of Defense, to the congressional committees, and back to the Air Force. This sample request is of a prior approval type of reprogramming which requires the preparation and processing of a form DD 1415-1, "Reprogramming Action." The process would be similar for notification type of reprogramming.

The entire review and approval process by the congressional committees is represented by one single box. In reality, at least four, and at times, six committees or subcommittees are involved in the congressional review. An important aspect of the congressional review is that each committee must respond to DOD in writing before DOD can proceed with a requested prior approval reprogramming action. DOD cannot assume a positive response after a set period of time. For notification reprogramming actions, DOD can proceed without a congressional response after a 15-day waiting period, except in the case of the Senate Committee on Appropriations. (See app. III for a further discussion of congressional review.)

Figure I.3: Flowchart for Air Force Prior Approval Reprogramming Requests


Program manager in field — Formulates reprogramming request
AF Comptroller Appropriation Managers (CAM) — Prepare Staff Summary Sheet (a routing slip with summary and approval for offices)
AF Comptroller Budget Management Division — Formal language review
Returned to CAM — Incorporate revisions
Air Staff — Direct coordination for technical review
AF Comptroller Budget Management Division — Review revisions and security review
AF Comptroller Director of Budget — Approval on Staff Summary Sheet
AF Comptroller — Approval of Staff Summary Sheet
Deputy Chief of Staff —Coordination
Vice Chief — Coordination


Secretariate of the Air Force — Coordination
Assistant Secretary, AF/Financial Management — Signature on transmittal memo
Office of Assistant Secretary of Defense (Comptroller) Program and Financial Control OASD(C)(P&FC) Control initial review and distribution
OASD(C) Program/Budget Directorates Review and discuss with Services if necessary
Returned to OASD(C) (P&FC) Final review and approval
OASD(C) Program/Budget — Approval
Assistant Secretary Defense (Comptroller) Approval
Deputy Secretary of Defense – Signature
OMB – Review and approval
DOD Reprogramming Liaison OASD(C) – Control and transmittal
Congressional Committees – Review and approval
DOD Reprogramming Liaison OASD(C) – Control and transmittal
OASD(C) P&FC – Control
If not entirely approved by the committees
If approved by committees
OASD(C)P&FC – Implementing memo to Assistant Secretary AF/Financial Management
OASD(C) Program/Budget – For implementing memo to Assistant Secretary AF Financial Management

REPROGRAMMING STATISTICS FOR DOD

DOD is required to submit to the Congress a semiannual report (March 31 and September 30) showing cumulative effects of all reprogramming and transfer changes to each individual line item within each appropriation account. This report is called a DD 1416, "Report of Programs." We analyzed the value and volume of reprogramming activity shown in the DD 1416 reports for fiscal years 1981 through 1985. The following tables summarize our analysis.

Table II.1 shows the gross changes to the congressionally approved program (congressional base) by fiscal year. It divides the changes into those which require the Secretary's approval (SECDEF gross change) and those not requiring the Secretary's approval (Service gross change).

Table II.1: Changes to the Congressional Base by Fiscal Year

Fiscal year	Congressional base	SECDEF gross change[a]	Service gross change	Total gross change	Percent total gross to base
	- - - - - - - - - - - -	(000 omitted)	- - - - - - - - - - - -		
1981	$ 156,968,104	$ 1,486,064	$ 2,096,546	$ 3,582,610	2.3
1982	189,817,313	2,795,078	3,170,960	5,966,038	3.1
1983	215,002,870	4,884,799	3,772,616	8,657,415	4.0
1984	231,967,079	2,673,184	2,764,187	5,437,371	2.3
1985	273,960,412	2,936,604	2,552,255	5,488,859	2.0
Total	$1,067,715,778	$14,775,729	$14,356,564	$29,132,293	2.7

[a] Gross means the sum of all changes, whether the changes were additions or deletions.

It should be noted that funds in some appropriations are available for obligations later than the fiscal year in which the funds were appropriated. For example, the Air Force Aircraft Procurement account is a 3-year appropriation, which means that funds appropriated in fiscal year 1984 are available for obligation until the end of fiscal year 1986. For the Navy Shipbuilding and Conversion account, funds are available for obligation for 5 years. According to a DOD official, even though accounts are available for a number of years, DOD guidance stipulates that reprogramming actions involving the application of funds to any new program or increases in quantity or enlargement of scope of existing approved programs, will not be taken after the first fiscal year of availability of an account. Reprogramming because of congressional direction as to the use of unobligated balances and increased contract costs may occur after the first year of availability.

Table II.2 shows the total gross changes to the congressional base by appropriation account. The accounts are ranked from the one with the highest gross change to the one with the lowest.

Table II.2: Total Gross Changes to Appropriation Accounts During Fiscal Years 1981 - 1985

Service	Account	Congressional base	Total gross change	Percent total gross to base
		- - - -(000 omitted)- - - -		
Air Force	Aircraft Procurement	$ 89,763,002	$ 2,649,859	3.0
Navy	Ship Conversion	55,849,100	2,529,662	4.5
Army	Other Procurement	20,458,221	2,039,725	10.0
Navy	Other Procurement	20,083,266	2,033,538	10.1
Navy	Aircraft Procurement	46,743,020	1,823,082	3.9
Navy	RDT&E	33,487,643	1,708,048	5.1
Air Force	RDT&E	52,045,111	1,579,528	3.0
Army	Weapons Procurement	21,201,349	1,424,301	6.7
Army	Ammunition Procurement	10,686,494	1,364,273	12.8
Air Force	Other Procurement	29,915,790	1,285,661	4.3
Army	RDT&E	19,165,132	1,171,371	6.1
Army	O&M	80,103,267	1,052,636	1.3
Navy	Weapons Procurement	17,663,972	969,941	5.5
Air Force	Missile Procurement	27,542,919	798,923	2.9
Navy	Procurement Marine Corps	7,790,380	772,094	9.9
Air Force	O&M	84,907,665	756,736	0.9
Army	Aircraft Procurement	12,747,320	633,725	5.0
Army	Military Personnel	77,432,674	603,268	0.8
Navy	Military Personnel	57,124,864	586,896	1.0
Army	Missile Procurement	12,412,900	491,150	4.0
Defense agencies	O&M	28,977,207	480,129	1.7
Air Force	Military Personnel	64,414,690	430,553	0.7
Navy	O&M	106,239,517	401,069	0.4
Defense agencies	RDT&E	12,030,690	327,673	2.7
Navy	Military Personnel Marine Corps	17,535,697	200,928	1.1
Air Force	O&M National Guard	8,506,236	198,800	2.3
Army	Reserve Personnel	6,640,000	179,376	2.7
Army	National Guard Personnel	9,142,080	154,105	1.7
Defense agencies	Procurement	3,771,367	125,809	3.3
Navy	O&M Marine Corps	6,965,119	83,248	1.2
Navy	Reserve Personnel	3,262,702	56,805	1.7
Army	O&M National Guard	5,889,411	47,764	0.8
Army	O&M Reserve	3,322,664	33,816	1.0
Air Force	National Guard Personnel	2,889,744	32,587	1.1
Air Force	Reserve Personnel	1,920,637	30,070	1.6
Air Force	O&M Reserve	3,717,880	27,950	0.8
Navy	O&M Reserve	3,231,237	26,940	0.8
Navy	Reserve Personnel Marine Corps	892,835	12,329	1.4
Navy	O&M Marine Corps Reserve	231,533	4,099	1.8
Defense agencies	Test and Evaluation	258,100	3,736	1.4
Defense agencies	National Guard Equipment	731,000	90	0.0
Defense agencies	Foreign Currency	21,343	0	0.0
Total		$1,067,715,778	$29,132,293	2.7

Table II.3 shows the total number of line items in the accounts over the 5-year period and how many of them had their funding increased and/or decreased as a result of reprogramming actions. We are using line item as a general term to describe the categories within accounts that identify purposes, projects, or types of activities financed.

Table II.3: Line Items Affected by Reprogramming Actions During Fiscal Years 1981 - 1985

Service	Account	Line items Total	 Total increased	 Total decreased
Navy	RDT&E	1,572	508	920
Navy	Other Procurement	1,563	511	826
Army	Other Procurement	1,258	487	577
Air Force	Other Procurement	1,215	425	560
Army	RDT&E	1,093	499	506
Air Force	RDT&E	1,045	350	508
Navy	Procurement Marine Corps	659	256	325
Navy	Aircraft Procurement	387	157	166
Army	Ammunition Procurement	358	143	132
Navy	Weapons Procurement	318	87	117
Air Force	Aircraft Procurement	259	82	123
Defense agencies	RDT&E	219	91	65
Army	Weapons Procurement	207	68	81
Air Force	Missile Procurement	192	55	80
Navy	Ship Conversion	163	32	50
Army	Aircraft Procurement	149	77	54
Defense agencies	Procurement	130	50	55
Army	Missile Procurement	110	42	32
Defense agencies	O&M	101	46	38
Air Force	O&M	40	21	19
Navy	O&M	37	25	12
Army	Military Personnel	31	21	9
Air Force	Military Personnel	31	12	16
Navy	Military Personnel	31	19	7
Army	O&M	30	20	10
Navy	Military Personnel Marine Corps	26	14	11
Navy	O&M Marine Corps	20	15	5
Army	O&M National Guard	20	9	11
Defense agencies	National Guard Equipment	19	0	0
Air Force	O&M National Guard	18	12	6
Navy	O&M Marine Corps Reserve	15	5	5
Air Force	O&M Reserve	15	9	6
Army	O&M Reserve	15	6	9
Navy	O&M Reserve	15	7	8
Army	Reserve Personnel	11	5	5
Air Force	Reserve Personnel	11	7	4
Defense agencies	Test and Evaluation	11	1	2
Army	National Guard Personnel	11	5	5
Air Force	National Guard Personnel	11	6	5
Navy	Reserve Personnel	10	6	4
Navy	Reserve Personnel Marine Corps	10	5	6
Defense agencies	Foreign Currency	5	0	0
Total		11,461	4,196	5,380

Table II.4 shows, for the 5-year period, how many line items were added after the congressional base was established. Added line items represent programs, projects, or activities not funded by the Congress in the DOD Appropriations Act. The table does not distinguish between actions requiring the Secretary's approval and those actions not requiring the Secretary's approval.

Table II.4: Appropriation Accounts Which Had Line Items Added After Establishment of the Congressional Base During Fiscal Years 1981 - 1985

Service	Account	Line Items Added
Army	Other Procurement	74
Navy	RDT&E	37
Army	RDT&E	33
Navy	Other Procurement	20
Air Force	Other Procurement	19
Army	Ammunition Procurement	17
Army	Aircraft Procurement	17
Defense agencies	RDT&E	16
Army	Weapons Procurement	13
Navy	Weapons Procurement	12
Air Force	RDT&E	12
Navy	Ship Conversions	8
Air Force	Aircraft Procurement	7
Air Force	Missile Procurement	5
Army	Missile Procurement	5
Navy	Procurement Marine Corps	5
Navy	Aircraft Procurement	4
Total		304

Table II.5 displays how many line items were deleted or reduced to zero, over the five-year period, as a result of reprogramming actions after the congressional base was established. The table does not distinguish between actions requiring the Secretary's approval and those not requiring the Secretary's approval.

Table II.5: Appropriation Accounts Which Had Line Items Reduced to Zero After Establishment of the Congressional Base During Fiscal Years 1981 - 1985

Service	Account	Line Items Zero
Army	Other Procurement	79
Navy	Procurement Marine Corps	39
Air Force	Other Procurement	34
Navy	Other Procurement	33
Army	Ammunition Procurement	16
Army	RDT&E	11
Navy	RDT&E	10
Navy	Aircraft Procurement	9
Navy	Weapons Procurement	8
Army	Weapons Procurement	6
Air Force	Aircraft Procurement	4
Defense agencies	Procurement	2
Air Force	Missile Procurement	2
Army	Aircraft Procurement	2
Air Force	RDT&E	2
Navy	Ship Conversions	2
Defense agencies	RDT&E	1
Army	Missile Procurement	1
Total		261

CONGRESSIONAL COMMITTEES' REPROGRAMMING PROCESS FOR DOD

Four congressional committees are normally involved in the review process for DOD reprogramming requests. These are the Subcommittees on Defense of the House and Senate Committees on Appropriations, and the House and Senate Committees on Armed Services.[2] Staff members from these committees view the reprogramming review process as an important oversight tool. In their opinion, it discourages DOD from starting new projects or changing the scope of its efforts without congressional review. In addition, the reprogramming requests serve to notify the committees of changes to the budget and help to focus attention on problem areas.

COMMITTEES' PROCESSES

The committees' review processes for reprogramming requests are nonstatutory. In this context, they provide an element of congressional control over spending flexibility short of resorting to the full legislative process. Absent a statutory basis, requirements imposed by committees for prior approval and/or notification of reprogrammings are not legally binding upon the agencies.[3] Compliance with such nonstatutory requirements is largely a matter of "keeping faith" with the pertinent committees.

Under the current reprogramming review process, all four committees must approve prior approval requests before DOD can proceed with the action. As a result, disapproval by any one committee negates the necessity of other committee action. In the event that one or more committees disapprove a proposed prior approval reprogramming request, DOD may request reconsideration or may modify the request to gain approval. In addition, the Subcommittee on Defense of the Senate Committee on Appropriations prohibits DOD from proceeding with notification reprogrammings until it approves the actions. This procedure, in essence, changes notification reprogrammings to prior approval reprogrammings for this committee.

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[2] If the request deals with intelligence-related items being funded through the DOD budget, then the House Permanent Select Committee on Intelligence and the Senate Select Committee on Intelligence are also involved in reviewing the reprogramming requests.

[3] See GAO decision B-174702, July 24, 1974.

Table III.1 shows the number of committee members involved in the reprogramming review process. (Members serving on more than one of these committees were only counted once.)

Table III.1: Committee Members Involved in the Reprogramming Review Process

	House	Senate	Total
Appropriations Subcommittees on Defense	11	16	27
Armed Services	46	19	65
Total	57	35	92
Percent of total membership	13.1	35.0	17.2

The processes and procedures differ somewhat among the four committees involved in reviewing reprogramming requests. The following descriptions highlight these differences.

House Committee on Appropriations

The House Committee on Appropriations processes reprogramming requests through its Subcommittee on Defense. Following receipt of a number of DD 1415 request forms, the Subcommittee holds hearings at which the Service Comptrollers testify. Copies of the DD 1415 documents which are under consideration are distributed to the subcommittee members at the time of the hearings. Committee discussion and action is then taken during mark-up sessions, which are held several times a year. The Committee will include notification reprogrammings in the hearings, especially if it appears that DOD is starting a new program or the affected programs are of congressional interest. If there are no problems with a notification reprogramming, the staff advises DOD either by telephone or letter; however, a letter is sent if there are problems.

If a particular reprogramming request is time urgent, the staff will send a memorandum to the subcommittee members requesting a response by a specific date in lieu of a hearing.

If no comments are received, the staff forwards the committee's decision to DOD.

Senate Committee on Appropriations

The Senate Committee on Appropriations also processes reprogramming requests through its Subcommittee on Defense. When reprogramming requests are received by the Subcommittee, they are assigned to specific staff who review the DD 1415 documents and bring them to the attention of appropriate members, including the Chairman and Ranking Minority Member. Following the review by staff and the Chairman and Ranking Minority Member, a letter is sent to DOD advising it of the Committee's decision. If a request is on a sensitive issue, the staff will request a committee vote through memorandum with a 5- to 7-day response limit. In these cases, a response must be received from each subcommittee member.

Although the Subcommittee does not usually hold hearings on reprogramming requests, requests can be discussed at other hearings or at mark-up sessions.

DOD is to wait, under committee procedures, for a response letter on all reprogramming requests. In this regard, prior approval and notification reprogrammings are considered equivalent by the Subcommittee. This procedure assures review of all requests, even those that arrive during a congressional recess.

House Committee on Armed Services

When reprogramming requests are received by the House Committee on Armed Services, they are assigned to specific staff members who review the DD 1415 documents and bring them to the attention of appropriate members, including the Chairman and Ranking Minority Member. Prior approval reprogramming requests receive a full committee review and are discussed during regular committee business meetings. Objections to prior approvals are handled during the discussion at committee meetings. Special hearings on reprogramming requests are atypical. During congressional recesses, the Chairman and Ranking Minority Member have generally been given the authority to act on time urgent requests.

If the DD 1415 is a notification reprogramming, the committee takes no action unless the staff identifies a problem. Notifications are not sent to members; they are only sent to the staff who have 15 days for review. Objections are normally handled through discussions with the Chairman. A letter is sent to DOD expressing the objection. This will generally stop the reprogramming.

The committee staff also review internal reprogrammings. If the staff have a concern about the internal reprogramming, it is raised to the committee. However, there is no formal procedure for committee involvement.

Senate Committee on Armed Services

Upon receipt of DD 1415 reprogramming requests (prior approval, notification or internal reprogrammings), the Senate Committee on Armed Services staff distributes copies to all full committee professional staff members and the legislative assistants of senators serving on the committee. If no objections are received within 10 days, a positive response is prepared for transmittal to DOD. This letter is circulated to the committee's professional staff members for approval and signature on a routing slip. This step ensures that all are aware of the reprogramming request and that no one has objections to the reprogramming. After staff approval, the letter is sent to the majority and minority staff directors and the committee general counsel for approval. One senator can deny a reprogramming; however, the denial can be overridden by a full committee vote. (We were told that the need to override a denial has not arisen.)

For notifications, the committee will only take action if a staff member has a problem with the reprogramming. There is normally no response to DOD on notifications. The committee will telephone DOD if a problem arises.

STAFF COMMENTS ON THE REPROGRAMMING PROCESS

In response to your concern, we asked key congressional committee staff if there was a mechanism to obtain the views of or disseminate information to members of Congress who are not on the committee reviewing the reprogramming actions. There is no such mechanism. The staff members expressed a variety of views about whether such a process is needed or is accomplished through other mechanisms. One staff member said that the committee is under no obligation to provide such information or solicit views. The staff member said that any member is welcome to attend committee hearings on reprogramming, however, it would be the member's responsibility to find out about a particular reprogramming request. He added that this would be difficult for a noncommittee member. Another staff member said that the views of other members of Congress are considered informally, in that the annual budget review process brings members' concerns to light. Another staff member said that, although there is no formal mechanism to solicit views of noncommittee members, there is an informal process. In this case, committee staff are responsible for knowing the interests of members (from congressional debate or hearing statements). If a member has displayed interest in a particular area, the tasked staffer will contact the member's legislative assistant regarding those reprogramming requests.

One staff member said that the below-threshold reprogramming actions are assumed to be minor and are within the management prerogative of DOD. He added that if problems began to occur with the below-threshold reprogramming actions, then the ground rules for them would have to be rethought. Currently, there is no formal process for congressional denial of below-threshold and/or internal reprogramming actions. One staff member said that if his committee had a problem with these types of actions, informal pressure would be applied to DOD to change its action. Another staff member said that DOD needs flexibility and that the Congress may be managing DOD too extensively at the line-item level.

As discussed earlier, if an item is known to be or has been designated as a special interest item, DOD uses the prior approval reprogramming process to obtain congressional approval. According to staff from several committees, special interest items evolve out of the deliberations of the committee or the Congress. More than one member would normally have to express concern. Special interest items usually involve controversial issues or problem areas. One staff member said that DOD interprets special interest very liberally and generally chooses to include an item if there is any question that it is of special interest.

Each of the staff members we interviewed stressed that reprogramming is an important process that is needed. One said that the process requires a degree of trust from both parties toward each other. He believes that the Secretary of Defense has been vested with the authority to reprogram and, as long as it is used appropriately, the delegation will continue.

REPROGRAMMING IN SELECTED CIVILIAN AGENCIES

In order to obtain a perspective on DOD's reprogramming process, we discussed reprogramming procedures with officials of the U.S. Department of Agriculture (USDA), the Department of Housing and Urban Development (HUD), the General Services Administration (GSA), and the National Aeronautics and Space Administration (NASA). We also met with an official from the Office of Management and Budget (OMB) to discuss its role and the requirements it places on agencies in relation to reprogramming.

Although these civilian agencies reprogram funds, certain aspects of reprogramming differ between DOD and the civilian agencies. Generally, procedures are less involved and less cumbersome for the civilian agencies.

One major difference between the reprogramming process for DOD and the civilian agencies is the congressional response. DOD waits for a written affirmative response before proceeding with certain reprogramming actions. At the civilian agencies, the general concept is that if no response is received, it means approval is granted. One agency official said that his agency can proceed with a reprogramming action even if objections are made. He said that the normal response from the congressional committee, though, is "Thank you for keeping us informed."

Also, these civilian agencies do not have regular or standard reports or forms associated with the reprogramming process. For example, rather than use a form similar to the DD 1415 to request a reprogramming action review by congressional committees, these agencies write a letter outlining the request. Also, these agencies do not file a report similar to DD 1416, which summarizes all reprogramming actions during the prior reporting period. In general, the agencies we met with maintain no statistics on reprogramming requests and actions.

SPECIFIC AGENCY REQUIREMENTS

Each of the agencies we visited was unique in some aspect of its reprogramming processes and/or procedures. Examples below show the variety of procedures involved and provide some insights on the specific differences between these civilian agencies and DOD.

NASA

NASA has three types of requirements affecting reprogramming. Under its annual Authorization Act, Public Law 99-170 in 1986, NASA must wait 30 days for a response to certain specified reprogramming requests. If NASA receives no reply, a "yes" response is assumed. This act also states that transfers between appropriations are limited to only transfers from "Research and Development" or "Space Flight Control and Data Communications" to "Construction of Facilities" and are limited to one-half of 1 percent of the budgeted line item amount. In addition, NASA notifies the committees if a reprogramming action would cause a program to exceed its authorized level.

The second type of requirement stems from an informal agreement between NASA and the appropriations committees whereby NASA submits an annual Operating Plan. The Plan provides details of planned operations, and although it is not submitted under any legal requirement, the committees can object to aspects of the Plan. If NASA exceeds funding of an Operating Plan budget item by $1 million or more, NASA notifies the committees.

In addition, committee reports annually place funding ceilings on various projects which can only be exceeded with approval of the appropriations committees. Committee reports also state that committee approval is required before personnel compensation funds can be used for any other purpose.

Five subcommittees are involved in NASA's budget--the Subcommittees on HUD-Independent Agencies of the House and Senate Committees on Appropriations; the Subcommittees on Space Science and Applications and on Transportation, Aviation and Materials of the House Committee on Science and Technology; and the Subcommittee on Science Technology and Space of the Senate Committee on Commerce, Science and Transportation.

USDA

According to USDA officials, there are three methods of moving funds within USDA--reprogramming, interchange, and emergency.

Reprogramming actions at USDA require written notification to the appropriations committees with 2 weeks allowed for comment. USDA also notifies the committees if the planned movement of funds from one program to another equals 10 percent, or $50,000, whichever is lower. Reprogramming actions in the Forest Service require written approval from the appropriations committees.

The USDA's Interchange Authority (7 U.S.C. 2257) authorizes, within certain limits, bureaus, divisions, or offices within USDA to interchange appropriations for expenditures on items included within expenses of the bureaus, divisions, or offices. We were told that only one or two of these interchanges are made a year.

USDA has authority to transfer funds between USDA agencies in only one situation. The Animal and Plant Health Inspection Service can, in the event of an emergency (e.g., avian flu in chickens), receive transferred funds from any USDA account and then inform the congressional committees of the action. USDA will sometimes offset emergency situation transfers with supplemental appropriation requests.

USDA has several appropriations subcommittees involved in its reprogramming actions. The Subcommittees on Agriculture, Rural Development and Related Agencies of the House and Senate Committees on Appropriations handle most appropriations for USDA while the Subcommittee on Interior of the House Committee on Appropriations and the Subcommittee on Interior and Related Agencies of the Senate Committee on Appropriations handle appropriations for the Forest Service. Authorization for most USDA programs is provided by the House Committee on Agriculture and the Senate Committee on Agriculture, Nutrition and Forestry.

HUD

HUD's official handbook on reprogramming states that funds can be reprogrammed between programs and activities without committee approval as long as the funds do not exceed $250,000 or a 10 percent threshold. If the reprogramming action exceeds the threshold, HUD requests committee approval. In addition, the Subcommittees on HUD-Independent Agencies of the House and Senate Committees on Appropriations desire notification of reprogramming actions involving less than the above-mentioned thresholds if the actions would have the affect of committing HUD to significant funding requirements in future years. In some cases, HUD will inform the subcommittees, through the reprogramming process, of program changes even if no funds are involved when the programs are those in which the subcommittees have shown particular interest. According to a HUD official, the department's budget justification is very detailed and is viewed as a type of contract between the agency and the Congress. Thus, all significant changes are reported.

HUD's authorization is through the House Committee on Banking, Finance and Urban Affairs and the Senate Committee on Banking, Housing and Urban Affairs.

GSA

According to a GSA official, the closest parallel GSA has to DOD's reprogramming occurs within the Consumer Information Center. In this case, the Subcommittees on HUD-Independent Agencies of the House and Senate Committees on Appropriations require detailed tracking of reprogrammings. GSA can reprogram up to $250,000, or 10 percent, whichever is less, between line items within the Center's budget. The committees request a meeting for any reprogramming that exceeds these levels. In contrast, according to the GSA official, the Subcommittees on Treasury, Postal Service and General Government of the House and Senate Committees on Appropriations, which oversee other aspects of the GSA budget, give GSA flexibility in spending the budget, but want to be informed of major changes.

GSA also has general transfer authority, which it uses to administer accounts in the Public Buildings Service. In this case, GSA has the authority to move funds between the various Public Buildings Service appropriation accounts to meet mandatory requirements (for example, increased heating costs) with committee approval. GSA can reprogram funds between all other individual congressionally appropriated accounts up to a limit of 1 percent of the account. GSA receives written approval from the committees before proceeding.

In addition to the appropriations subcommittees, authorization for the Public Buildings Service is provided by the Subcommittee on Public Buildings and Grounds of the House Committee on Public Works and Transportation and the Senate Committee on Environment and Public Works. The GSA official added that permanent authorization alleviates the need for routine oversight of the remainder of GSA's budget.

PAPERFLOW PROCESS AT CIVILIAN AGENCIES

Each of the agencies has regulations or rules regarding reprogramming. They range from formal regulations at HUD to a very informal set of "Ground Rules" at USDA to no written procedures at NASA. In general, the process was described as one where requests originate at the program working level, flow through several levels of review throughout the organization, and receive final review and approval by the agency head.

ROLE OF OMB

OMB plays a role in all reprogramming requests, whether from DOD or the civilian agencies. OMB provides guidance for the preparation and submission of annual budgets and associated materials concerning the budget process for all agencies of the government in its Circular Number A-11. This circular requires that agencies submit all proposed budget justification materials to OMB for clearance prior to transmittal to congressional committees or individual members of the Congress or their staff. It defines these materials to include reprogramming requests.

Pursuant to DOD's general transfer authority, OMB approval is required for any DOD transfer of funds. According to an OMB official, OMB usually can process a DOD request in 3 or 4 days. The OMB examiners review prior approval DD 1415 forms for any problems or areas of concern.

OMB examiners do not normally discuss DOD reprogramming requests with congressional staff; they leave that to the service representatives. An OMB official mentioned that long time frames are sometimes required for processing reprogramming requests by both DOD and the congressional committees. He said that quicker responses might be desired, however, he concurred with the statements of several other agency officials and congressional staff who said that the cumbersome process ensures that only high priority requests are submitted.

Officials at two of the civilian agencies stated that their relationship with OMB is an informal one. Clearance is normally by phone or memorandum. There is no set time limit regarding the reprogramming action. OMB is sent a copy of the reprogramming request. If there is a problem, the agency involved will hold the reprogramming until the problem is solved.

GLOSSARY

Activity	A specific and distinguishable line of work performed by one or more organizational components of a governmental unit for the purpose of discharging a function or subfunction for which the governmental unit is responsible.
Authorizing Committee	A standing committee of the House or Senate with legislative jurisdiction over the subject matter of those laws, or parts of laws, that set up or continue the legal operations of Federal programs or agencies.
Budget Activity	Category within accounts that identifies purposes, projects, or types of activities financed. For DOD, Budget Activity is normally associated with Personnel Compensation and O&M accounts. A similar definition applies to Line Item for Procurement accounts and Program Element for RDT&E accounts.
Object Classification	A uniform classification identifying the transactions of the federal government by the nature of the goods or services purchased (such as personnel compensation, supplies and materials, and equipment), without regard to the agency involved or the purpose of the programs for which they are used.
Oversight Committee	The congressional committee charged with general oversight of the operation of an agency or program. In most cases, but not all, the oversight committee for an agency is also the authorizing committee for that agency's programs.
Program	Generally defined as an organized set of activities directed toward a common purpose, or goal, undertaken or proposed by an agency in order to carry out its responsibilities. In practice, however, the term program has many uses and thus does not have a well-defined standard meaning in the legislative process. Program is used to describe an agency's mission, programs, functions, activities, services, projects, and processes.

Reprogramming	Use of funds in an appropriation account for purposes other than those contemplated at the time of appropriation. Reprogramming is generally preceded by consultation between the federal agencies and the appropriate congressional committees. It may involve formal notification and opportunity for disapproval by congressional committees.
Transfer of Funds	When authorized in law, all or part of the budget authority in one account or subdivision, may be transferred within that account or to another account.

(392212)

United States General Accounting Office

GAO

Report to the Honorable David H. Pryor
United States Senate

July 1986

DOD FINANCIAL MANAGEMENT

Improper Use of Foreign Currency Fluctuations Account

GAO/NSIAD-86-173

GAO

United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-222274

July 11, 1986

The Honorable David H. Pryor
United States Senate

Dear Senator Pryor:

On February 3, 1986, you requested that we undertake a study of the Department of Defense (DOD) Foreign Currency Fluctuations, Defense (FCF,D) account. Specifically, you requested that we review the account's history, analyze the need for and justifications of transactions involving this account, and determine the source and type of funds being transferred into the account. Your staff also asked us to determine the impact of the Gramm-Rudman-Hollings act on the FCF,D account.

In summary, we found that, because DOD used budgeting records rather than the services' accounting records as a basis for managing and reporting on the FCF,D account and because of DOD's interpretation of Public Law 96-38, it (1) was able to retain the use of $659.7 million of funds that appropriately should have been returned to the Treasury, and (2) in effect circumvented a congressionally imposed ceiling on the FCF,D account. We believe that DOD's handling of the FCF,D account exemplifies the problems with federal financial management that we previously reported in our Managing the Cost of Government (GAO/AFMD-85-35, 35A, February 1985.)

For fiscal year 1986, the Congress recognized the substantial amount of funds—$1.32 billion—that DOD had accumulated in the FCF,D account and took action to reduce it. The Congress may wish to further clarify how it wants the FCF,D account to be used.

Background

The FCF,D account was established by Public Law 95-457, dated October 13, 1978. This law gave the Secretary of Defense authority to make transfers from the account to the services' Operations and Maintenance (O&M) and Military Personnel accounts.[1] The purpose of the FCF,D account is to provide a mechanism for stabilizing that portion of the O&M appropriation used for purchasing foreign goods and services by providing funds to the O&M account when foreign exchange rates are unfavorable (when losses occur), and by receiving funds from the O&M account when the rates are favorable (when gains occur). The basic intent is to ensure that any given O&M appropriation for the purchase of foreign goods and services will purchase the budgeted amount of goods and services, regardless of the gains and losses of the dollar caused by currency fluctuations. To date, the Congress has appropriated $970 million to the FCF,D account.

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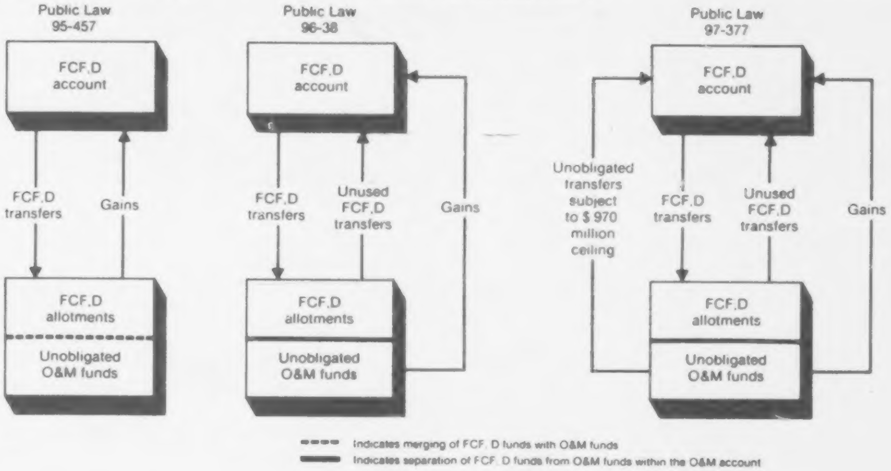
[1] Public Law 95-457 included the Military Personnel account, but the Congress eliminated it at the end of fiscal year 1980. Thus, this report, unless otherwise specified, addresses only the O&M account.

FCF,D funds differ from O&M funds in two ways. First, while O&M funds are used to purchase goods and services, FCF,D funds can be used only to pay for the increased cost of those purchases caused by unfavorable foreign currency exchange rates. Second, FCF,D funds are no-year funds (available until used), while O&M funds are 1-year funds. That is, O&M funds expire at the end of the fiscal year in which they are appropriated if they are not obligated. Expired funds remain in the O&M account for 2 additional years and can be used to pay existing obligations and liabilities previously incurred but cannot be used to incur new obligations. At the end of the 2-year period, unused expired funds flow to a surplus account within the Treasury's general fund.

The original operations of the FCF,D account as established by Public Law 95-457 have been amended twice. First, Public Law 96-38, dated July 25, 1979, authorizes the transfer back of unused FCF,D funds that the Office of the Secretary of Defense (OSD) allots to the services' O&M accounts. Second, Public Law 97-377, dated December 21, 1982, authorizes the direct transfer of unobligated O&M funds to the FCF,D account as long as the direct transfer does not cause the balance in the FCF,D account to exceed $970 million. (It is to be noted that this law imposes no ceiling on the amount of allotted FCF,D funds or gains that can be transferred to the FCF,D account.) Figure 1 illustrates these changes.

Figure 1: Legislated Changes in Transfer Authority Between FCF,D and O&M Accounts


Public Law 95-457
FCF,D account
FCF,D transfers
Gains
FCF,D allotments
Unobligated O&M funds
Public Law 96-38
FCF,D account
FCF,D transfers
Unused FCF,D transfers
Gains
FCF,D allotments
Unobligated O&M funds
Public Law 97-377
FCF,D account
Unobligated transfers subject to $ 970 million ceiling
FCF,D transfers
Unused FCF,D transfers
Gains
FCF,D allotments
Unobligated O&M funds
Indicates merging of FCF, D funds with O&M funds
Indicates separation of FCF, D funds from O&M funds within the O&M account

While Public Law 95-457 authorized FCF,D funds to be merged with O&M funds, the later laws, in our opinion, require that the two types of funds be kept separate. By authorizing unused allotments of FCF,D funds to be returned to the FCF,D account, Public Law 96-38 requires, in effect, that allotments be segregated from O&M funds in order to determine the unused portions of the amount allotted. By authorizing the transfer of unobligated O&M funds into the FCF,D account subject to a $970-million ceiling in that account, Public Law 97-377 also requires this segregation in order to distinguish O&M funds from FCF,D allotments since allotments are not subject to the ceiling.

Relationship Between FCF,D and O&M Appropriations

Before the FCF,D appropriation was established, foreign purchases were obligated at the foreign exchange rates in existence at the time of the obligation. If the value of the U.S. dollar weakened before that obligation was liquidated, the additional funds needed came from the O&M account. On the other hand, if the U.S. dollar became stronger, causing the amount spent to be less than the amount obligated, the excess funds allowed additional purchases to be made from the O&M account.

With the establishment of the FCF,D appropriation, foreign purchases are obligated at the foreign exchange rates as determined in the annual budget process. In other words, O&M funds appropriated for foreign purchases are based on stated foreign exchange rates. Additional costs resulting from a subsequent unfavorable exchange rate are to be paid with funds from the FCF,D account, and any gain resulting from a favorable exchange rate is to be transferred to the FCF,D account.

The transactions of fiscal year 1979, when the exchange rate was unfavorable, and those of fiscal year 1981, when the exchange rate was favorable, illustrate the relationship between the FCF,D and O&M accounts. In fiscal year 1979, DOD obligated $2.1 billion of O&M funds to purchase foreign goods and services. These funds were obligated at the same foreign exchange rates used in preparing the budget. As these obligations were liquidated, an additional $251.5 million was needed because the dollar had become weaker than it was when the budget was submitted. DOD used FCF,D funds to pay these costs.

During fiscal year 1981, DOD obligated $2.5 billion of O&M funds and liquidated $1,842 million of this amount. However, since the dollar was stronger at the time of the liquidations than at the time of the obligations, DOD spent only $1,593 million. The excess amount (about $250 million) was a gain. After adjusting this gain for losses on the 1979 and 1980 obligations liquidated in 1981, a net gain of $187 million was included in the amount that was transferred from the services to the FCF,D account.

Budget Transfers Used for Accounting

Using budget transfers for reporting rather than actual gains and losses allowed DOD, based on its interpretation of the law, to retain FCF,D funds for future use by spending O&M funds that it would otherwise have lost. In addition, the use of this budget-transfer procedure in fiscal year 1985 made it possible for DOD to, in effect, circumvent the congressional ceiling on direct transfers of unobligated O&M funds. Since budget transfers rather than the services' accounting records are used for reporting on the FCF,D appropriation, DOD, in our opinion, has consistently incorrectly reported the balance in the FCF,D account.

At the beginning of each fiscal year in which the dollar's value has decreased from that used in the budget process, OSD transfers funds from the FCF,D account to the services' O&M accounts. The amount transferred is based on estimates of what will be needed and is determined by using the then-current exchange rates. If estimates later in the year show that not enough funds were transferred, OSD makes additional transfers. If funds transferred to the services are not needed, the unneeded amounts—as well as net gains—are transferred back to the FCF,D account. These transfers are the basis on which OSD accounts for the FCF,D appropriation and reports year-end balances for FCF,D funds. For example, in fiscal year 1979, OSD transferred $483.5 million of the $500 million appropriated for the FCF,D account to the services' O&M and Military Personnel accounts. DOD reported these transfers to the Treasury and reported the balance in the FCF,D account as $16.5 million.

Budget transfers, however, fail to show what actually happened to the no-year FCF,D funds, i.e., how much was spent or gained in a given fiscal year. For example, of the $483.5 million OSD transferred to the services in fiscal year 1979, only $368.6 million was spent.[2] Consequently, the balance of no-year funds that should have been available in the FCF,D account was $131.4 million, not the $16.5 million OSD reported. Had the actual amount of no-year funds been reported, the Congress might have appropriated less for fiscal year 1980 than the $470 million it did appropriate.

Substitution of Expired O&M Funds for Spent FCF,D Funds

Since budget transfers are used to account for FCF,D funds, DOD is able to substitute expired O&M funds that are about to flow into the Treasury's general fund for FCF,D funds that have already been spent. In 1979, 1980, and 1983, as O&M obligations to purchase foreign goods and services were liquidated, DOD used FCF,D funds to cover additional costs due to unfavorable foreign currency fluctuations. However, in 1981, 1982, and 1985, DOD changed its budget records but not its accounting records to indicate that O&M expired funds[3] had been spent to cover much of these additional costs which were originally paid for with FCF,D funds.

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[2] The $368.6 million includes $251.5 million from the O&M account and $117.1 million from the Military Personnel account.

[3] We could not determine the source for all the expired O&M funds substituted for spent FCF,D funds. However, we did establish that some of the funds had expired for reasons unrelated to foreign purchases or foreign currency fluctuations. For example, most of the 1983 expired O&M funds that the Navy substituted in 1985 for spent FCF,D funds were deobligated O&M program funds, and some of the deobligated funds came from budgets of U.S.-based commands which do not make foreign purchases.

For example, in 1985, when it became evident that the O&M account would have at least $340 million of excess 1983 funds, OSD told the services (1) to report that they had used O&M funds to finance their 1983 losses due to foreign currency fluctuations even though they had already paid for these losses with FCF,D funds, and (2) to return the FCF,D allotted funds to the FCF,D account. This procedure mischaracterizes what actually happened. OSD, in effect, transferred $340 million from the services' O&M appropriations to its FCF,D account. As shown in table 1, this procedure, since the inception of the FCF,D account, has allowed DOD to gain use of $659.7 million that it otherwise would have had to return to the Treasury.

Table 1: Use of Funds Gained by DOD

Dollars in Millions

Fiscal year in which substitution recorded	Fiscal year in which O&M funds appropriated	Spent funds restored to FCF,D no-year account
1981	1979	$144.7
1982	1980, 1981	175.0
1985	1983	340.0
		$659.7

Unauthorized Retention of Appropriated Funds

OSD officials state that Public Law 96-38 authorizes the after-the-fact substitution because it contains a clause saying that funds other than FCF,D funds can be used to liquidate obligations incurred due to fluctuations in currency exchange rates if these "other funds are, or become, available." OSD officials interpret this clause to mean that O&M funds can be used to cover unfavorable foreign currency fluctuations that occurred before the funds became available. We do not believe that Public Law 96-38 means that other funds (O&M funds) can be used to cover unfavorable foreign currency fluctuations which occurred and were paid for with FCF,D funds before the O&M funds became available. Consequently, the after-the-fact substitutions, in our opinion, are unauthorized.

Since the substitutions are unauthorized, the funds OSD transferred were, in effect, O&M funds. However, Public Law 96-38, dated July 25, 1979, provides no authority to transfer O&M funds into the FCF,D account. Consequently, the transfers of $319.7 million of unobligated O&M funds in 1981 and 1982 are unauthorized and should have been returned to the Treasury. The transfers of $340 million in 1985 are also unauthorized since they caused the FCF,D account balance to exceed the congressionally imposed ceiling for such transfers.

1985 Substitution Circumvents Congressional Ceiling

While substitutions took place in 1981, 1982, and 1985 to spend expired O&M funds, the 1985 substitution also had the effect of circumventing the legislated ceiling imposed by Public Law 97-377. In December 1982, Public Law 97-377 granted DOD authority to transfer expired O&M funds directly to the no-year FCF,D appropriation. However, the legislation granting the authority also established a $970-million ceiling when making such transfers. In 1984, DOD used this authority to transfer $404 million of 1-year O&M-program funds into the no-year FCF,D account, bringing its balance to $970 million. Consequently, in 1985, when DOD found that it had $340 million of expired O&M funds that it would have liked to transfer, it could not because the ceiling had been reached. DOD then substituted the $340 million of O&M funds for a like amount of FCF,D funds that had already been spent. As previously stated, this procedure, in effect, transferred unobligated O&M funds to the FCF,D account. Thus, the substitution accomplished the same result that a direct transfer would have; that is, it increased no-year FCF,D funds by $340 million.

Year-End FCF,D Balances

Using the services' "Foreign Currency Fluctuations" reports, which are based on their accounting records, we calculated what we believe the fiscal year-end FCF,D balances should have been (see table 2) and compared them with what DOD reported to the Treasury Department based on budget transfers (see table 3).

Table 2: Year-End Balances Based on Services' Accounting Records

Dollars in Millions

Fiscal year	Beginning balance	Appropriated funds	Fluctuation gains/(losses)	Transfers unrelated to foreign purchases in/(out)	Year-end balances per accounting records
1979	$ 0	$500.0	$(368.6)	$ 0	$131.4
1980	131.4	470.0	(446.3)	0	155.0
1981	155.0	0	187.4	0	342.4
1982	342.4	0	325.3	0	667.7
1983	667.7	0	(146.3)	(174.6)	346.8
1984	346.8	0	(56.7)	404.0	694.1
1985	694.1	0	(34.0)	309.9[a]	970.0

[a] Amount that could have been transferred directly from O&M account to FCF,D account, according to Public Law 97-377.

Table 3: Comparison of Balances Based on Services' Accounting Records With DOD-Reported Balances

Dollars in Millions

Fiscal Year	DOD	Services
1979	$ 16.5	$131.4
1980	57.6	155.0
1981	487.1	342.4
1982	987.4	667.7
1983	506.1	346.8
1984	970.0	694.1
1985	1,319.9	970.0

Impact of Congressional Actions

For fiscal year 1986, the Congress recognized the large amount of funds available in the FCF,D account—$1.32 billion—and made three adjustments to reduce the amount of no-year funds available. First, the Congress, by basing the O&M budget on higher foreign exchange rates, caused a $400-million reduction in the O&M appropriation for purchasing foreign goods and services. DOD requested $2,751.4 million, and the Congress increased the budgeted foreign exchange rates per U.S. dollar to reduce the O&M appropriations to $2,351.4 million. The adjustment, in turn, will require the $400 million to be funded from the FCF,D account if DOD purchases the budgeted amount of foreign goods and services.

Second, the Congress reduced the O&M appropriation another $468 million and included a general provision allowing DOD to transfer a like amount from the FCF,D account to the O&M operating accounts. This transfer allows DOD to buy $468 million of goods that it budgeted for in the O&M account but reduces the FCF,D account to pay for those goods.

Third, the Gramm-Rudman-Hollings act required a reduction of $64.7 million from the FCF,D account.[4] Table 4 shows the three budget reductions.

Table 4: Congressional Reductions to FCF,D Account After September 30, 1985

Balance as of September 30, 1985		$1,319,928,000
Reductions per 1986 appropriation		
Foreign exchange rate adjustment	$400,000,000	
Transfer authority	468,000,000	868,000,000
Subtotal		**$451,928,000**
Gramm-Rudman-Hollings reduction		64,680,000
Balance after congressional reductions		**$387,248,000**

Source and Type of Unobligated Funds Transferred Into the FCF,D Account Cannot Be Determined

Transfers of unobligated O&M funds into the FCF,D account have been either deobligated funds (gains), which resulted from the dollar's becoming stronger, or expired O&M program funds which either were never obligated or were deobligated for some reason other than foreign currency fluctuations. Since the services' headquarters do not maintain records on the source (from where within the services the funds came) and type (why the funds became expired), but rather recognize the total amount as a single pool of funds, we were unable to determine specifically why expired funds existed without doing extensive work—i.e., contract audits at the user commands.

Conclusions

In our report, Managing the Cost of Government, we discuss what we believe are some major problems in federal financial management today, and outline some basic financial management principles that could serve as the basis for financial management improvements. That report defines financial management as encompassing the processes and functions of (1) planning and programming, (2) budgeting, (3) budget execution and accounting, and (4) audit and evaluation. It views sound financial management as four distinct but interrelated phases, supported and linked by useful program and cost data.

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[4] On July 7, 1986, the Supreme Court of the United States held unconstitutional the process by which spending reductions were to be instituted pursuant to calculations made by the Comptroller General. However, the Act has a fallback deficit reduction process under which spending reductions may be made. At this time it is unclear if similar or different reductions will be made under this process.

To be useful for daily program management, and congressional and executive branch decision-making, that information must be reliable, consistent over time, and comparable among similar activities, so that it presents an accurate picture of program activities and costs. In our view, DOD reports regarding the FCF,D and O&M accounts do not meet these criteria. Information gaps and weak links can occur when the budget execution and accounting phase is not integrated with the budgeting phase.

DOD used budgeting records rather than accounting records to report on its FCF,D funds and substituted O&M funds for FCF,D funds which had already been appropriately spent to cover currency fluctuations. Both actions are contrary to sound financial management practices and resulted in DOD's

- retaining $659.7 million of previously spent no-year FCF,D funds for future use by using $659.7 million of expired O&M funds that should have been returned to a merged surplus account within the Treasury's general fund, and
- circumventing the congressionally imposed ceiling for direct transfer of unobligated O&M funds to the FCF,D account.

DOD officials believe that Public Law 96-38, which amended the law originally establishing the FCF,D account, authorizes after-the-fact substitution of funds because the law says that "other funds" can be used to liquidate obligations incurred due to fluctuations in currency exchange rates if these funds "are, or become, available." We do not believe that this law meant that such funds can be used to cover unfavorable foreign currency fluctuations which occurred and were disposed of before those funds became available. Consequently, we consider the after-the-fact substitutions unauthorized. Moreover, the transfers in 1985 exceeded the ceiling imposed by Public Law 97-377.

Matters for Congressional Consideration

Because DOD, in our opinion, has used unauthorized transfers as a result of its interpretation of Public Law 96-38, the Congress may wish to clarify the use of the FCF,D appropriation and include a reporting requirement which would show the actual amounts of FCF,D funds being spent as well as the source of funds flowing into the account. In our view, sound financial management practices require that DOD report separately each fiscal year all sources of funds—annual appropriations, unobligated O&M funds, and gains from foreign currency fluctuations—flowing into the FCF,D account and actual expenditures from the account.

Accurate accounting-based reports on what actually happened provides both DOD managers and the Congress the information they need to assess the effects of both foreign currency fluctuations and O&M purchases of foreign goods and services.

Objective, Scope, and Methodology

Our objective was to analyze the FCF,D appropriation to determine how the account operates and is used. We researched the legislative history to determine its intended purpose and operating procedures. We also examined all budget transfers in and out of the FCF,D account and DOD reports of gains and losses occurring due to fluctuations in foreign currency exchange rates. The records reviewed covered the period from fiscal year 1979 through January 1986.

Our review was conducted in the Washington, D.C., vicinity and included contacting the following organizations:

- Office of the Secretary of Defense,
- Washington Headquarters Services,
- Office of the Comptroller of the Navy,
- Office of the Comptroller of the Air Force, and
- Office of the Comptroller of the Army.

At each organization, we interviewed responsible officials and obtained pertinent documents. Our review was conducted from February through June 1986 in accordance with generally accepted government auditing standards.

As requested by your office, we did not obtain formal agency comments on this report. However, we did discuss it with officials in the office of the Assistant Secretary of Defense, Comptroller and have included their comments as appropriate.

As planned with your office, we plan no further distribution of this report until 10 days from the date of this report. Then, we will send copies of this report to the Chairmen of the Appropriations, Armed Services, Government Operations, and Government Affairs Committees; the Secretaries of Defense, the Army, the Navy, and the Air Force; and other interested parties. If you have any questions, please call Martin M Ferber, Associate Director for Manpower, Reserve Affairs and Logistics at 275-5140.

Sincerely yours,

Frank C Conahan

Frank C. Conahan
Director

Senator **Pryor**. Its lesson for the inflation windfall is twofold. First, there is no apparent limit to the way that DOD makes use of money it should not have had in the first place. The more it budgets for inflation, the more flexibility DOD has ultimately.

Second, revolving funds are a poor model for how to manage inflation funding, contrary to what some others have recommended.

These two GAO studies that we released this morning add to a tremendously important body of work that the GAO has already conducted on the inflation windfall. Comptroller General Bowsher and his very, very professional and competent staff deserve tremendous credit for exposing and explaining this whole morass we find ourselves in today. Some of these people are with Mr. Bowsher today, Mr. Vice Chairman. I would like to commend them. They should know that without the kind of independent professional work that they have been doing the entire Federal Government would be in very, very sad shape.

Finally, Mr. Vice Chairman, I understand that GAO has been helping our staffs put together the outline of a bill on this subject. I believe that what has been outlined so far in an important step forward, but I also believe some improvements must be made to end this windfall.

To do so, I believe the bill must, one, make it impossible to reprogram money intended for inflation to be used for any other purpose; two, insist that in-excess inflation monies are returned to the Treasury; three, prohibit absolutely any special inflation kickers for weapons programs; four, to prevent DOD's using inflation funds at a rate faster than inflation is actually occurring; and five, to prevent DOD from giving itself windfalls by projecting more inflation in the future than is likely to occur.

There is one additional element I have not mentioned but I also believe is essential. Yet another GAO study makes it clear that DOD is not the only Federal agency with an inflation budgeting and accounting problem. The very same problem exists in various civilian agencies. If we solve the inflation problem in DOD, we should also address it in other agencies of the Federal Government.

If all of us agree on these principles, Mr. Vice Chairman, I believe that we could end inflation windfalls in the future and bring honesty and accuracy to inflation budgeting. Up to now, Congress has done nothing to end the problem. There is no excuse for our inaction unless, of course, we want to continue to be a part of a slush fund operation that so far has cost the taxpayers $44 billion.

I look forward to working with you on this problem. I hope we can and I believe that there is a solution. I thank you, Mr. Vice Chairman, and I thank you, Senator Mattingly.

[The prepared statement of Senator Pryor follows:]

PREPARED STATEMENT OF HON. DAVID PRYOR

THE CONTINUING DEFENSE INFLATION WINDFALL

Chairman Proxmire, thank you for your invitation to testify at this hearing. Without you and this committee, the Congress would be lost at sea on many fundamental economic issues. With your attention on the Defense Department's inflation windfall, I have hope that Congress can now do something about it. Up to now we have just watched it happen and waited for reports that another $4 billion has mysteriously turned up from DoD's seemingly endless store of extra cash. It may interest you to know that during our last recess DoD once again found a little extra pocket change -- this time $4.7 billion.

I welcome what I understand to be the focus of this hearing: how to solve the problem. One thing we do not need, Mr. Chairman, is more studies. GAO, CBO, the House Armed Services Committee, the Military Reform Caucus and many others have studied it to death.

Some of these studies are long and detailed, but the problem is really quite simple: the Pentagon cooked the inflation books to give itself a gigantic slush fund, and not only did Congress let them get away with it, we cooperated. Once DoD got its hands on the money, it could not have been spent if we in Congress had not allowed it through reprogrammings, transfers and re-appropriations. We are only asking for a continuation of the windfall if we do not insist on effective new budgeting and spending procedures in both the Pentagon and in Congress.

I believe there are four essential steps to ending the abuse.

First, we must identify and consistently use an honest, objective measure of inflation -- not a self-serving one cooked up in federal bureaucracies. The GAO has recommended that we use the GNP inflation index. That one may not be the most accurate, but at least it is objective and uncontrolled by self-serving bureaucrats.

Second, we must prohibit special inflation multipliers, such as the now infamous Major Commodity Index -- known as the 30% "kicker" -- for weapons programs. These only serve to ease raids on the federal treasury or on other DoD programs, such as readiness programs, which are less able to protect themselves from the voracious needs of weapons system cost growth.

Third, we must adopt a process in Congress where we take a few moments, each and every year, to check and see if the amount of money we appropriated for inflation was the right amount. Incredibly, we have not been doing this; we need to do it on a systematic, formal basis. Sometimes this checking process will mean that DoD owes some money to the Treasury; sometimes it will mean that we owe DoD a supplemental.

Fourth, we in Congress need to learn to resist the temptation to reprogram for our pet projects money that has a strange habit of showing up just as we start considering authorization and appropriations bills. When the inflation windfall shows up in its $4 billion packets, as it did last year and seems to be again this year, we should not think of that money as belonging to DoD. It was appropriated on the grounds that it would cover inflation, but the inflation did not occur. The justification for its being in DoD's coffers ended, and the money should go back to the Treasury.

One of the ways we in Congress have been allowing the inflation windfall to stay with DoD is through the reprogramming process. In the last five years, we in Congress have disposed of $29 billion in the Defense Department through reprogramming. According to the Secretary of Defense, at least $13 billion of those reprogrammed dollars were inflation windfall dollars.

How did this reprogrammed money reviewed and spent? The procedures are very interesting. In the Defense Department there are written regulations for approval, but in Congress there are none. In the various committees that approve Defense Department reprogrammings, each has a different set of informal procedures. Only one committee bothers to have any regular hearings; many times some committee members are not consulted; other times, the review is very cursory; sometimes the approval for reprogramming is communicated over the telephone. And, perhaps most shocking of all, from 1981 to 1985, over $14 billion in reprogrammings were never approved by Congress at all: we were only notified about them after the fact.

How do I know these things? Several months ago, I asked GAO to conduct a study of the entire reprogramming process. The report was just finished this week; I understand it is the first, comprehensive study of reprogramming ever conducted, and I am releasing it to the public at this hearing. I think, Mr. Chairman, you will find it extremely interesting. It certainly indicates to me that DoD is not the only part of government that could use a little reform.

Unfortunately, Congress is not the only institution that is using squirrelly procedures for disposing of the inflation windfall. I also asked GAO to look into something in the Defense Department called the Foreign Currency Fluctuations Account. This special revolving fund is used to off-set fluctuations in the value of the dollar for Defense Department purchases in foreign countries. What the GAO found was that DoD has been cooking the books in the account. From 1981 to 1985, DoD, and I quote from the report, "was able to retain the use of $659.7 million of funds that appropriately should have been returned to the Treasury...and in effect circumvented a congressionally imposed ceiling on the [foreign currency] account."

This GAO study is also brand new, and I am releasing it, too, for the first time at this hearing. Its lesson for the inflation windfall is twofold: first, only imagination seems to limit DoD in the ways it makes use of money it should not have in the first place; second, some others have suggested that we need a revolving fund -- just like this foreign currency account -- to manage inflation appropriations; the Defense Department has done us the favor of discrediting that suggestion.

These two GAO studies add to a tremendously important body of work that GAO has already conducted on the inflation windfall. Comptroller General Bowsher and his very professional staff deserve tremendous credit for exposing and explaining the whole morass. Some of those people are with Mr. Bowsher today. Those who are, and those back at the GAO office, should know that without the kind of independent, professional work they have been doing, the entire government would be in very sad shape indeed.

Finally, Mr. Chairman, I understand that GAO has been helping our staffs put together the outline of a bill on this subject. I believe that what has been outlined so far is an important step forward, but I also believe some improvements must be made to really end the windfall.

To do so, I believe the bill must -

- make it impossible to reprogram money intended for inflation to be used for any other purpose;

- insist that excess inflation monies are returned to the Treasury;

- prohibit absolutely any special inflation "kickers" for weapons programs;

- prevent DoD's using inflation funds at a rate faster than it is actually occurring, and

- prevent DoD from giving itself windfalls by projecting more inflation in the future than is likely to occur.

Finally, there is an additional element that I have not mentioned but which I also believe is essential. Yet another GAO study makes it clear that DoD is not the only federal agency with an inflation budgeting and accounting problem. The very same problem exists in various civilian agencies. If we solve the inflation problem in DoD, we should also address it in other agencies.

If all of us agree on these principles, Mr. Chairman, I believe that we can end future inflation windfalls and bring honesty and accuracy to inflation budgeting.

Up to now, Congress has done nothing to end the problem. There is no excuse for our inaction; unless, of course, we want to perpetuate a slush fund operation -- an operation that we have been a part of -- that so far has cost the taxpayers $44 billion. I look forward to working with you on the problem. I hope we can.

Senator PROXMIRE. Thank you very much, Senator Pryor. I appreciate so much your excellent statement and particularly your initiative in requesting the investigations by the General Accounting Office. I am sure they are going to be very helpful to the subcommittee and to the Congress and, for that matter, in the long run, to the taxpayers.

Now when you say the Pentagon cooked the inflation books—that's the term you used—that implies they were overestimating inflation in their forecasts and they did so intentionally to obtain budget windfalls from Congress.

What leads you to believe that they did that intentionally and that it was not just the result of their uncertainty in making forecasts?

Senator PRYOR. Mr. Vice Chairman, because in the DOD projection of inflation I think that we will see a much higher estimate for inflation than in the other Federal agencies of government. So that I would say that there was an intentional forecasting to give them ultimately a windfall at the end of the fiscal year when inflation had actually not occurred.

They have also used something called the major commodity index to forecast inflation. This is also known around in some accounting terms as the 30 percent kicker for weapons programs and it is in the major weapons program that we see a tremendous amount of reprogramming taking place. And to use this very infamous major commodity index, it only serves I think to begin future inflation stories that we now are addressing and attempting to solve.

Senator PROXMIRE. It's my understanding that they overestimated inflation in 9 out of the last 10 years or 10 out of the last 11 years.

Senator PRYOR. I think that is correct, Mr. Vice Chairman.

Senator PROXMIRE. Nine out of the last 10 years. And the 1 year they didn't, the economist who underestimated inflation was fired.

Senator PRYOR. Was fired?

Senator PROXMIRE. Yes.

Senator PRYOR. In other words, he was sort of a semiwhistleblower. That happens to a lot of people in the Department of Defense and we see a lot of that lately, Mr. Vice Chairman.

Senator PROXMIRE. Now about $15 billion of the excess inflation appropriations were reprogrammed with congressional approval according to the Pentagon's latest figures, and you released a GAO report on reprogramming this morning.

First, let me ask you about something you said with respect to that reprogramming that I think was kind of shocking.

I had always thought, because when I've had some responsibility for reprogramming in the past as I'm sure you have as chairman of a committee or ranking member, you were asked to approve it. You said, however, that the reprogramming is done by telephone. And I'd like to know who calls who and do committee staff—not the chairman of the committee but committee staff—actually approve requests over the phone or does the committee chairman always do the talking?

Senator PRYOR. The General Accounting Office in its statement, Mr. Vice Chairman—I must say that it's a very indepth statement and it's a study that's the very first on reprogramming I think that we have had in the past. This particular study indicates that by telephone that many millions of dollars are now being approved to be spent for functions not approved by the Congress through the authorization and appropriation process.

The telephone is only an example of the informality of the system that is utilized today, and whether those calls go from the Department of Defense in a major weapons program to let's say a staff person or to an individual Senator, we have no written rules on the Senate side or the House side about how these excess inflation windfall dollars are to be appropriated.

Senator PROXMIRE. Is it your understanding that some of the approval does come from just a staff member and not from a committee chairman?

Senator PRYOR. Mr. Vice Chairman, that is my feeling. I have talked to members of the Armed Services Committee, in all due respect to those ladies and gentlemen, and also to the various Appropriations Committees that deal with these. I have asked them in the past several weeks to tell me about reprogramming, how does reprogramming work? Here's a big cushion of funds or here's a DIVAD that has been canceled in several million dollars or whatever in an account. What happens to those funds?

Senator MATTINGLY. Excuse me, but which committee did you ask?

Senator PRYOR. I've asked several members of——

Senator MATTINGLY. Of which committee?

Senator PRYOR. Of the Senate Armed Services Committee.

Senator MATTINGLY. OK.

Senator PRYOR. And of the appropriations subcommittee that deals with defense.

Senator MATTINGLY. OK.

Senator PRYOR. And not in writing, but informally and say, "Look, Mr. So-and-so, or Senator Jones, tell me how this reprogramming system works." Most of the times I don't get a very clear answer. And the reason we don't get a very clear answer is that there are no rules. There are no rules. And, in my opinion, no limits. If the inflation windfall was, say, for 1 fiscal year—at the end of the fiscal year inflation had not occurred and they had $20 billion left over that was not being utilized because of savings in inflation, it is my assumption at this point that legally, with no laws being broken and no rules being violated, that the Department of Defense could probably even start a new weapons system, that they could certainly, as Senator Mattingly knows, take $3 billion or $5 billion of these funds and use them to hire consultants for consulting services.

They have absolute, total authority with the exception of a very informal process—no rules, no regulations in writing—where they go to the committees and get a very cursory examination and ultimately I assume approval.

Senator PROXMIRE. So what you are saying is that the inflation overestimate results in $7 to $9 billion a year—it has over the last 5 years. That $7 to $9 billion, instead of going to the Treasury and being returned because it was an overestimate of what they needed, is reprogrammed often informally, sometimes even through a staff member, and that $7 to $9 billion a year or some of it—a large proportion of it or a significant proportion of it—is reapportioned to other programs to which Congress has given no authority and there's been no approval in any regular procedure?

Senator PRYOR. If there is approval, it is extremely cursory and very, very informal. In other words, the Senate does never have to act on that again. The House does never have to act on that again. The Congress is basically bypassed in this process.

I think in the entirety of the U.S. Congress the GAO report reported that there are, I believe, six committees with jurisdiction over reprogramming, about 92 individual Senators and Congressmen involved, but my thinking is that problably less than 6 to 10 at the most really have any real input in the decisonmaking process of how to spend this additional money.

Secretary Weinberger has recently tolds us that $13 billion of the $44 billion since 1981 has been reprogrammed.

Senator PROXMIRE. Who calls from the Pentagon to get the approval?

Senator PRYOR. I have no idea of this, Mr. Vice Chairman.

Senator PROXMIRE. Do you know how much reprogramming gets done by telephone, what proportion by telephone? Do you have any idea?

Senator PRYOR. I have no idea.

Senator PROXMIRE. Is it you impression that it's as much as, say, half of it or more than half?

Senator PRYOR. Comptroller General Bowsher may have a more definitive statement on that, or some of the individuals who participated in this study which is being released today.

But the Congress is bypassed. We are circumvented. And it amounts at the end of the year to a huge slush fund. I have even suggested informally that any dollar that is reprogrammed, any dollar that has not been specifically appropriated, should come back to the House and Senate, line item, let us look at those reprogramming efforts. They say that would be too hard to do. I say we ought to do it.

Second, I think that what we ought to consider is, if there is inflation, we ought to make up that inflation in a supplemental appropriation bill at the end of the year after the cycle has run rather than trying to project what is going to be the inflation figure for the next 12 months. That is one other suggestion I would like for us to consider as we prepare some sort of legislation or some sort of strings on this money.

Senator PROXMIRE. Senator Mattingly.

Senator MATTINGLY. Thank you, Mr. Vice Chairman.

I'd like to ask several questions. I'm not sure whether we're mixing apples and oranges between inflation and reprogramming here.

Senator Pryor, your comment in reference to reprogramming, does that have to do with just reprogramming moneys from inflation?

Senator PRYOR. I think it goes further than that, Senator Mattingly.

Senator MATTINGLY. I think it does, too.

Senator **Pryor**. I think that you point is very, very succinct. I think it's good question that you asked.

What happens here is we have seen about $44 billion reprogrammed, about $29 billion there has been some approval on and the rest we had nothing to do with really as an institution. I think that some canceled or maybe some that were delayed and the money is still in that account, I have a sense that some of that money is being reprogrammed and shuffled around from weapon to weapon.

Senator **Mattingly**. That's probably not unique in the Defense Department.

Senator **Pryor**. I think that's true, too. I sometimes find myself maybe being a little overly critical of the Department of Defense, but I think this is happening in all agencies.

Senator **Mattingly**. Probably even in the legislative branch, right?

Senator **Pryor**. There is a possibility of that.

Senator **Mattingly**. I was chairman of the Legislative Branch Subcommittee for 2 years and it seems to me that it was done.

Senator **Pryor**. I imagine there's a little of that, yes. But we're talking about big dollars here, Senator.

Senator **Mattingly**. I have not had an opportunity to read that GAO report so I'm making an assumption, but I would hope the intent of the GAO would be not to say that the Congress—and me as chairman of the Military Construction Subcommittee—is not notified of reprogramming requests. Because I am, and it is done in writing.

Senator **Pryor**. I think the military construction account is very much more efficient.

Senator **Mattingly**. Well, no, I think No. 1, I'm not certain whether the authorizing committee has any authority to reprogram moneys. I think it's the Appropriations Committee. Senator Proximire may know this better than I do.

Senator **Proxmire**. Both.

Senator **Mattingly**. If I'm not mistaken. It is not both committees. I know in the case of Military Construction Subcommittee we have no signoff from the Armed Services Committee on military construction reprogramming requests from the Department of Defense. So I was just saying—now I may be wrong on that——

Senator **Pryor**. The staff advises me, Senator Mattingly, that the authorizing committees do have the authority to do this reprogramming.

Senator **Mattingly**. If a reprogramming request comes from the DOD is your staff saying that it goes to the Armed Services Committtee and to the Appropriations Committee? I would have your staff recheck it.

Senator **Proxmire**. Well, Senator Pryor, I think you've made the point and you've made it very clearly that the problem here is that there are no rules.

Senator **Pryor**. There are no rules on it.

Senator **Proxmire**. It's just an informal arrangement.

Senator **Mattingly**. Let me just ask a question. I think you're doing a good service. I have not had an opportunity to read this, but I also know that I see controls in respect to reprogramming for military construction. The requests do come in and the ranking member and I have to sign off on the reprogramming request. We also stop some of those reprogramming requests. And they come over in written fashion from the DOD. I have never had a telephone call with a reprogramming request.

Senator **Pryor**. Sentor, if I may respond, the——

Senator **Mattingly**. They may do that in Defense Appropriations Subcommittee, but I have not seen that happen in the Military Construction Appropriations Subcommittee. I'd just like to have that clear.

Senator **Pryor**. Most of the reprogramming is done within the weapons system apparatus in the accounting.

Second, the military construction, I understand, is handled in a very, very different way and I am not here today to complain about military construction because I think that is much more efficient and sees the light of day to a great deal more extent.

Senator **Mattingly**. I just noticed that they didn't mention in the GAO report military construction. I haven't read the full report yet.

Anyway, talking about the disparity in the inflation rate, I agree with you. But it's not limited to defense.

Senator **Pryor**. Senator, let me draw your attention in this GAO report——

Senator **Mattingly**. I have not had an opportunity to read it yet.

Senator **Pryor**. On page 12 and 13, there's a real beautiful sort of a Rube Goldberg chart here, Mr. Vice Chairman and Senator Mattingly, about the rules that the Department of Defense follows and their procedure, but we don't have any in the Congress.

Senator **Mattingly**. Any what?

Senator **Pryor**. We don't have any rules. We don't have anything except informal arrangements and I'm not saying that anyone is in violation of their rules.

Senator **Mattingly**. I know that you're probably right, but I know that we write in on a regular basis into appropriations bills requirements for DOD reprogrammings.

But thank you. I think you're heading in the right direction trying to find where the money is. We have a trillion dollar budget and there's nobody around this place that can truthfully say they know precisely where every dollar is.

Senator **Proxmire**. Senator Pryor, before you run to catch your plane to Little Rock, let me just ask you a couple questions.

How can Congress resist the temptation to reprogram, as you put it, when only four committees are involved in the informal requests that are made and when much reprogramming occurs without prior approval of the four committees? That's the House and the Senate, the Armed Services and Appropriations Committees. Are you saying that no reprogramming should be permitted unless a vote is taken on the floor of each House?

Senator **Pryor**. I'm saying that's pretty drastic, Mr. Vice Chairman, but we might consider that or we may have a floor there of let's say no reprogramming over a million dollars be done unless the House and Senate have a vote.

What we're doing is we have set up a way to circumvent the Congress not only in the authorization but also in the appropriations process, and we have lost our oversight. We have nothing to say about how these dollars are being expended.

I'm not on the Armed Services Committee. I'm not on the Appropriations Committee. And I may want the opportunity to ask about some of these dollars and why this weapon is being funded and Congress did not appropriate the funds for it. I may want that opportunity.

Under this system, this Senator does not have that opportunity. We're being bypassed and circumvented and I think it's wrong and I think that we need to have more oversight and more control.

Senator **Proxmire**. Well, I agree with that wholeheartedly. We're talking about several billion dollars. We're not talking about a few hundred thousand dollars or a million dollars; we're talking about a very large amount of money.

Senator **Pryor**. Well, Mr. Vice Chairman, we're talking about 20 times the budget of the State of Arkansas right here that we've reprogrammed, and probably maybe 30 times the budget of Arkansas we've reprogrammed with no real legislative oversight in the past 5 years. And that's a lot of money, $44 billion; $29 billion of which we were really notified of after the fact, after the funds had been allocated.

Senator **Proxmire**. Now you mentioned this special inflation multiplier for weapons programs known as the 30 percent kicker used by the Pentagon in its inflation forecast.

Can you explain the 30 percent kicker, what it was, and why it should be prohibited?

Senator **Pryor**. Well, I don't know a great deal about that, Mr. Vice Chairman, but the Pentagon has used this form of predicting the inflation rate. I think it is known by most economists that if we would use those indexes that represent what we might call the civilian index of prediction for inflation, we would come out much more accurately than the so-called 30 percent kicker for weapons program embodied in the major commodity index. And what we have done in using this particular prediction formula, the major commodity index, we have just guaranteed additional dollars going to the Department of Defense that most of us know, if we really thought about it, would not be necessary for appropriations.

Senator **Proxmire**. I kind of facetiously mentioned your catching a plane. I would hope if you want to do it, if you find it convenient, if you would like to stay and sit up here with the subcommittee and ask questions, because this is someting that you've done so much work with and I'm sure your questions would be very, very helpful in advancing the hearing this morning. So whatever you would like to do is fine.

Senator **Pryor**. I thank you, Mr. Vice Chairman. I have a Finance Committee meeting downstairs but I would like, if I might, to maybe be able to listen for a few moments to the statements that follow, and I do appreciate this, Mr. Vice Chairman.

Senator **Proxmire**. Very good.

Our next witness is the Honorable Charles Bowsher, Comptroller General of the United States. We are delighted to have you here and we look forward to your testimony. You can proceed in any way you wish. You have done a great job. We hope we can keep you a very vital part of the Congress of the United States and not shuffle you into the executive branch.

Mr. Bowsher. I hope so, too.

STATEMENT OF HON. CHARLES W. BOWSHER, COMPTROLLER GENERAL OF THE UNITED STATES, ACCOMPANIED BY DONNA M. HEIVILIN AND FRANK C. CONAHAN

Mr. Bowsher. Thank you very much, Senator Proxmire and Senator Pryor. It's a pleasure to be here. I'm going to read a fairly brief statement here.

In May 1985, Secretary Weinberger announced that he had found $4 billion in excess funds that he attributed to management improvements and inflation savings. He requested that these funds be reapplied to meet defense needs identified in the fiscal year 1986 budget. Secretary Weinberger's announcement raised congressional concerns about the size of DOD's inflation dividend and the total amount of excess funds that might still be available.

In analyzing DOD's inflation budgeting system, we found that between fiscal years 1982 and 1986 the administration budgeted more than was needed to cover inflation, resulting in an inflation dividend that we estimate to be about $44.5 billion.

We are not able to determine the precise amount of excess funds that is still available in DOD. A major difficulty in making such a determination is that the DOD accounting systems that track how funds are being used are not directly linked to the budgeting process. We believe, however, that much of the inflation dividend either has been spent on additional defense programs, or has been reprogrammed for other uses. Reprogramming actions in fiscal years 1980 through 1985 totaled about $26 billion. In recent years, frequency of reprogramming actions initiated because surplus funds were available has increased sharply.

We conclude that some funds may remain available as unobligated balances because DOD has been unable to meet its obligation plans. Between fiscal years 1980 and 1985, unobligated balances—net of lapsing funds—grew from $24.2 billion to $61.5 billion. At the start of fiscal year 1986, DOD had authority to obligate $440.4 billion; Gramm-Rudman-Hollings reduced this amount by $13.3 billion.

Now, I would like to speak for a moment about choosing the best index for budgeting for defense inflation. The inflation dividend occurred in all of the DOD appropriations accounts. However, over 65 percent occured in the procurement accounts partly due to the use of a special multiplier approved by the Office of Management and Budget for budgeting for inflation in major weapon systems. Senator Pryor pointed out this multiplier accounted for about one-third of the total dividend. In our September 1985 report, we recommended that this multiplier be eliminated. Our recommendation is supported by data in a recent report of the Department of Commerce's Bureau of Economic Analysis, BEA, which shows that actual inflation in major weapon systems fell below inflation in the general economy in fiscal year 1985. We note that in the fiscal year 1987 budget request OMB set the special multiplier at 1.0 percent—in other words, without a factor for calculating inflation—in DOD's major weapon system accounts.

Some critics of DOD's budgeting system have suggested that projections of the Producer Price Index, the PPI, should replace projections of the GNP deflator as the basis for budgeting for inflation. Our analysis shows that the prices of defense purchases have risen at about the same rate as the GNP deflator between fiscal years 1978 and 1984. This analysis also shows that changes in the GNP deflator more accurately predict changes in defense prices that do changes in the PPI. In addition, the GNP deflator is already being used in the budgeting process.

Now I'd like to speak a little bit about the difficulty in determining the total amount of inflation savings that were reapplied to new purposes in DOD or that were removed through congressional actions. Nor could we determine the amount of the dividend still available to DOD. That was, I might point out, Mr. Vice Chairman, what Senator D'Amato and others asked us to do last year and we just couldn't do it because of the system over there.

Now during fiscal years 1982 through 1986, the Congress routinely reviewed and adjusted budget requests. Although some adjustments were related to inflation savings, the historical record does not generally link budget reductions explicitly to inflation. The Congress reported budget reductions of $3.09 billion between fiscal years 1982 and 1986 in response to decreases in fuel prices. However, we could only find appropriation reductions and transfers directly attributed to nonfuel inflation dividends in fiscal years 1985 and 1986, totaling $4.795 billion.

Although DOD has a elaborate planning, programming and budgeting system—and I think many respects a very good one—its financial management system used to track the execution of the budget, does not enable us to easily audit either the use of the inflation funds or the available funds in excess of program requirements. As a result, we have examined unobligated balances and reprogramming actions as indicators of the existence of excess funds.

Also, as part of our efforts to oversee the defense budget, we examine the justification of selected items in DOD's annual budget requests. Last year we identified potential reductions of $11.7 billion for items such as ammunition, ships, aircraft, and missiles in DOD's fiscal year 1986 request. Some of the potential reductions were due to overestimates of inflation.

Unobligated balances now are a natural part of the concept of full funding that DOD applies in budgeting for major weapon systems. The aggregate level of unobligated balances should be the minimum funding needed to fulfill outyear contracts for the sum of the individual programs.

We could not determine the amount of funds required to cover contracts to be awarded in any year after the budget year. We also could not determine precisely why unobligated balances have grown significantly in recent years or why actual balances have far exceeded DOD estimates.

In our analysis of aggregate data on unobligated balances, we found that some funds remain available as unobligated balances because DOD has been unable to meet its obligation plans. Between fiscal years 1980 and 1985, unobligated balances as a percentage of the total authority available for obligation grew from 10.8 to 14.5 percent.

Throughout the 1980's, DOD has underestimated its unobligated balances. Recently, however, DOD has adjusted its estimates upward, reflecting more realistic obligation plans. We believe that actual unobligated balances in fiscal years 1986 and 1987 will likely remain higher than those in past years, but DOD estimates may more closely reflect the actual figures than has been the case in the past.

Now on reprogramming actions. The Congress has given DOD limited authority to reprogram and transfer appropriated funds. The total dollar value of reprogramming actions for fiscal years 1980 through 1985 was about $26 billion. Yearly reprogramming actions remained a relatively constant percentage of DOD's obligational authority throughout the period.

Reprogrammings fall into three broad categories: Above-threshold, below-threshold, and internal reprogrammings. In general, above-threshold reprogramming actions require either prior approval by the Congress or notification to the Congress. Below-threshold actions—those that fall below designated limits—do not require notification to the Congress, except when follow-on costs exceed the threshold. Internal reprogrammings include those actions that reclassify or realign funds and are not subject to threshold limitations.

Between fiscal years 1980 and 1985, above-threshold actions accounted for approximately 39 percent of the $26 billion total; below-threshold actions represented 36 percent of the total dollar value, but accounted for about 92 percent of the reprogramming actions. Internal reprogrammings accounted for the remaining 25 percent.

Our analysis of above-threshold actions showed that in recent years DOD reprogrammed fewer dollars to solve program problems. Instead, the rationale for reprogramming has shifted to the acquisition of unplanned requirements and other items, primarily those needed by classified programs. Funds that DOD identified as not needing reinstatement—in excess of the original purpose—have increased sharply. This suggests that these funds were in excess of original program requirements. Eighty-four percent of the funds reprogrammed above threshold in fiscal year 1985 or about $1.84 billion was in excess of original program requirements.

Now I would like to address the legislative proposal to change the inflation budgeting system. We believe strongly that the DOD financial management system needs reform. Changing the way DOD budgets and accounts for inflation is a part of the reform that is needed. Mr. Vice Chairman, you have requested our comments on draft legislation which changes the DOD inflation budgeting system.

Your proposal offers a three-pronged approach to ending inflation dividends in the defense budget. First, it calls for information on the inflation amounts requested for each budget appropriation account in DOD and the defense portion of the Department of Energy budget and for each weapon system covered by the Selected Acquisition Reporting System, sometimes known as the SAR system. Second, your proposal would earmark appropriations for inflation within each budget appropriation account and for each weapon system in the SAR system. It would also constrain the amount of inflation funds that may be used by limiting overall expenditures to actual inflation in the economy. The third prong which deals with reporting and auditing requires the Secretary of Defense and the Secretary of Energy to track inflation funds separately and to report annually on how the funds are being spent. We would be required to periodically audit and report to the Congress on whether the amount of inflation funds used are reconciled to actual inflation experienced in the economy.

One of my primary goals as Comptroller General is to build an effective financial management structure in our government that provides reliable and consistent information for policy formulation and management control. Successful reform requires that an integrated approach be taken in developing this structure. There are a whole range of reforms needed in order to build an effective financial management system for the Federal Government.

In my letter dated July 17 to you, I gave you an assessment of the most critical financial management problems facing the Nation. It would be preferable for the executive agencies to correct these problems on their own initiative. But absent that, I made some suggestions in my letter about the type of legislation needed to facilitate correction of the financial management problems.

Your legislative proposal contains the components that we believe are needed to correct the immediate financial management problem concerning DOD inflation funding, and for that reason I support the proposal. Undoubtedly, DOD and others have ideas on how to improve budgeting for defense inflation, and we need to develop an effective method cooperatively. In the meantime, your proposal should be given serious consideration.

Mr. Vice Chairman, this concludes my remarks. We would be happy to answer any questions.

Senator **Proxmire**. Thank you very much, Mr. Comptroller General.

The first thing I want to ask you about concerns the Supreme Court decision on Gramm-Rudman-Hollings and the proposal being considered to repeal the section of law making you removable by the Congress.

You know the dilemma many of us face. We want to cut spending to reduce the deficits. We also want to continue the invaluable investigative work you have done for the Congress independent—and I stress independent—of the executive branch.

For example, if you were under the discipline of the executive branch now, there's no way you would be permitted to make the report you're making right here this morning, in my judgment, to this subcommittee. The Congress, the American public could hardly have the kind of confidence I think they have now that you would freely and vigorously criticize and recommend changes in executive policies and actions.

What are your views on the pending proposal and do you have any views about what should be done?

Mr. **Bowsher**. Yes, we do, Mr. Vice Chairman. We feel that the basic legislation that created our office ought to be allowed to stand rather than changing it because we think it has worked for

65 years and that the GAO has been able to grow and evolve into a stronger organization doing more and more important work for the Congress, and also really advising the executive branch.

If they are to change the removal authority, which is what everybody is keying in on because the Supreme Court decision keyed in on that, we are worried. We don't know what kind of limitations the executive branch would try to put on us, but we are worried that they would do so and we can't foresee the future. That's why we feel it would be much better to leave the basic legislation as it is.

What does that mean? That means we might have to give up some of the executive branch type work that we do, but that's a very small part of our operation today. That really was the Gramm-Rudman-Hollings thing. When they put us in there with the automatic trigger decision, they were giving us a role that the courts ultimately decided was executive branch type work and, therefore, they said that we could not do that from a constitutional separation of powers issue.

But we would like very much to continue to do what we are doing which is the main thrust of our work, and that is to do the reviews that need to be done wherever the Federal dollar had gone, whether it's into an executive branch agency, whether it's to a State, or whether it's to a private contractor, and to report to Congress and then to let Congress take whatever legislative action they want and for the executive branch to take whatever actions they believe our recommendations warrant.

Senator **Proxmire**. Do you have any solution to what the Congress was aiming at in Gramm-Rudman Hollings? You see, if we do this—and I feel very strongly that we should protect you and keep you as a part of the Congress of the United States—but if we do that, we do lose the kind of independent estiate that we need on the kind of reductions that we have to sequester if we're going to achieve our objective.

Mr. **Bowsher**. There are several things that we could do. We could review the numbers coming from CBO and OMB for the Congress just as we were required to do in the original Gramm-Rudman legislation. What we just don't do is be the final decisionmaker.

I think the court has encouraged the Congress to think of the fallback position. In their majority decision what they said is Congress ought to make that final decision and to pass it. Now there is no question that that may sometimes be difficult and there might be a need for a more automatic trigger mechanism as the original legislation was trying to create, with us playing that role.

I think there are a variety of ways it could be done. There might be a separate commission set up not too different than the Chrysler loan board, if the Congress feels that they need that type of a thing, and you could even have presidential appointments there and even somebody like myself could serve on it as a separate presidential appointment. And you could be removed for cause or whatever the Congress would want to write in legislation.

But I would think you could have the backup procedure that would take place and we could play our role, we could play the role in a commission-type function. I think there are several ways of doing it and we're more than willing to do it. But I think just what the court has said is we can't make the final decision and order the President and the executive branch to carry it out.

Senator **Proxmire**. Let me just ask one more question on this particular issue. Many of us feel—and I made the assumption here that you would lose your independence if you were removable by the President. Is that the case? And what would be the consequences, in your view?

Mr. **Bowsher**. Well, as I say, we're not sure we would, but there's the potential there. In other words, if people like at OMB were to say, "Well, you can't send out that questionnaire" or "You have to send your questinnaires over to us when you're going to do a job so we can review them first," during their review of our budget—those are the kind of things where they could start to squeeze, you might say, the independence of the GAO.

When I first came into office, one of the Cabinet officers tried to intimidate us on the work we were doing with his department and, of course, he would have had greater leverage over us if we were more in the executive branch. So I think those are the kind of things that worry us.

Senator **Proxmire**. What would be your sense of accountability if you were removable by the President instead of the Congress?

Mr. **Bowsher**. Well, we think that we would try to be as independent as we have in the past, to be very honest. We've tried very hard to do that. A lot would depend on what the actions of other people would be and we're just not sure how they would go at us.

Senator **Proxmire**. All right. Now you estimate that there were $44.5 billion in excess inflation appropriations in the past 5 years. The Pentagon says the figure is $10 billion less or roughly $35.9 billion. Both are colossal amounts.

But why is there such a wide gap between the estimates and how do you know that yours is the corrrect one?

Mr. **Bowsher**. Well, we are not sure about the difference because we have not had the opportunity to look at their figures. They've come up with that figure just recently here and we'd be more than willing to meet with them and see what causes the difference.

We think that our figure—we worked with their records and everything like that over there—is pretty accurate. I don't think personally that we will ever get an absolute accurate figure on this area because as I say the records and the systems make it difficult to reach the final figure.

But we would certainly try to meet with them and see what the major difference is, if the subcommittee would like us to do that.

Senator **Proxmire**. Yes, we would like you to. Certainly I think I can tell you the subcommittee would very much like to see you do that.

Mr. **Bowsher**. Fine. And we'll send that back in a letter.

Senator **Proxmire**. You say you are unable to determine the precise amount of excess inflation funds still available in the Pentagon. I assume that means that there are billions of dollars you can't account for. You have a large staff of professional auditors. Why can't you track down this money and how much are we talking about?

Mr. Bowsher. Well, the problem is really in the accounting systems over there. The accounting systems don't match up exactly with the budgeting and, therefore, you have a hard time tracking the moneys in the procurement appropriations.

One of the major problems with the system at the Defense Department, and I would hope some day that the Defense Department officials would be willing to put in the investment to change it. If you're going to have full funding budgeting, then I think you need the capability to look at the money you have in that account, account for it by the SAR weapon systems and then by the balance in those appropriations and actually be able to say, "We have this much money and we have this much work yet to do on those contracts and, therefore, we can relate the two."

I think as long as everybody maintains that that's not possible to do, what you really have is a big checking account over there by these procurement appropriations and it is very difficult to relate the actual funds being spent out of them to the way the budgeting was done. And so we have the same problem when we try to identify the inflation money.

Senator Proxmire. Now you say the accounting system doesn't match up with the budgeting. Does that mean they have two sets of books?

Mr. Bowsher. No, it doesn't. It just says that they don't have their system properly integrated. In other words, they have budgeting procedures over here and they have accounting here, and one of the good rules both in the private and the Government sector is that you can relate your budgeting and your accounting system. This is true all over the Federal Government. This not just at Defense.

We have a real problem here of budgeting on one basis, accounting on somewhat the same basis but not entirely, and therefore, you just can't tie one set of numbers to another.

Mr. Vice Chairman, a couple years ago we put out a special report on this whole issue. One volume explained the problems and the second volume explained what we thought could be done about it. And I would hope some day that the executive branch would really be willing to take on this effort to modernize the accounting and budgeting systems and I would think that Congress would take a big interest in it because I think you people have a great deal of difficulty in making the right decisions on these big decisions without the proper information on how the money is actually spent. In other words, all the effort is always on the budget. We're always budgeting for next year and we're always getting the new estimate for the next year's budget and everything like that. What we're not doing is really looking to see how the money is being spent and being accounted for. That's where I think one of the big weaknesses is in our government.

Senator Proxmire. Well, good. You're going to be followed as you know by Mr. Helm. We'll ask Mr. Helm from the Defense Department for his response to that.

Mr. Bowsher. Yes.

Senator Proxmire. As you know, Mr. Helm is the comptroller of the Pentagon. He says that they can account for all the excess inflation funds and they have given us a table showing where the money went.

What's wrong with the Pentagon explanation?

Mr. **Bowsher**. Well, I think—and again, they tie up the inflation and the estimates in the appropriations and come forward and say, "We have handled it through the reprogrammings and the other things like that," but when our people go over and say, "Let's check it out now," we find that the paperwork just isn't there that we can assure you that it has been done.

Senator **Proxmire**. You say one-third of the total dividend is accounted for by the special multiplier for weapons systems approved by OMB. Did you learn from OMB and former Director Stockman who was there at the time why this special multiplier was approved and how it came to be at 30 percent?

Mr. **Bowsher**. What they told us and after we looked at the work is that basically you did have high inflation in the 1970's and so DOD was looking for a method to try to make sure they didn't have cost overruns in the future and so they came forward with this multiplier on top of the inflation budgeting that's in the budget. If you look back in the 1970's, you could see some justification for trying to do something like this.

I think the real problem was that when the inflation fell off, as it did dramatically and I think that's a great accomplishment myself, I think that they were not quick enough and did not come forward as soon as they should have and reduce that multiplier. So we kept getting the 1.3 percent factor for several fiscal years and it built up when the actual inflation was showing that it was not that high.

So I think that you have a situation where you did accumulate a fair amount of billions of dollars over there due to that fact that it just wasn't going to be needed. And I think that this year when the 1.3 factor was finally reduced down to 1.0 that the change was overdue.

Senator **Proxmire**. Let me follow up on that. I understand the special multiplier was based on the figures in the defense deflator showing high inflation rates for major weapons.

What was wrong with the Pentagon using this information in making the forecast for future inflation?

The higher multiplier for the major weapons?

Mr. **Bowsher**. There was nothing basically wrong I think at the time. In other words, in the early 1980's based on what happened in the 1970's, but I think that the thing that was really wrong was when it didn't come to be, that they should have come forward much quicker and reduced it, and they didn't do that until this past year after our report was issued last year.

I think another thing, too, is that one of the problems in the future is that if you put this in and then if it's not closely monitored, why you get the same result. So that I think the inflation, as we have put in our report, would be much better off to be worked off an inflation index. We think the one that they're using now, the GNP deflator, is probably the best one. And then some system is needed, possibly like your legislation, that would give them a way of having the inflation funds there and monitoring them.

But I really think in the final analysis that if they got a better accounting system over there to account for all the funds that Congress would not have to micromanage some of these issues.

Senator **Proxmire**. According to your figures the inflation dividend has averaged about $9 billion a year. The special multiplier accounts for $3 billion of that. This year the Pentagon has agreed not to use the special multiplier.

Does that mean only one-third of the problem has been removed and that if the trend continued there could be another inflation dividend of perhaps $6 billion in fiscal 1987?

Mr. **Bowsher**. There could be some part of an inflation dividend here developing just because the inflation is down so much, and I think that's what Congressman Aspen here was identifying the other day. And so you probably are building up some kind of an inflation dividend at this point.

Senator **Proxmire**. The Pentagon says there is no kicker in the 1987 budget. Research shows that in the outyears of the 1987 budget there is a kicker. Is GAO aware of this and how much does it amount to?

Mr. **Bowsher**. You mean the kicker is there from the old years that is still kicking in some of the inflation money as the money spends out you might say?

Senator **Proxmire**. That's right.

Mr. **Bowsher**. Donna Heivilin tells me that there is a kicker in the 1988-89 planning documents that are being looked at over there. Those, of course, have not come forward as official budget requests at this time.

Senator **Proxmire**. Is it your view that because the defense deflator measures prices when weapons are delivered and many are 2 to 3 years in construction or more, the lag distorts the inflation picture depending on whether the trend is falling or rising inflation?

Mr. **Bowsher**. Yes. It's the timing of the thing. That's one of the reasons we would be inclined to use the GNP deflator. There's the timing feature and also the learning curve feature that worries us in the BEA defense deflator.

Senator **Proxmire**. The inflation rate fell steadily in the past 5 years. Should the Pentagon comptroller have known that the defense deflator would lag behind the falling inflation rate? Can you say whether this information was known to the comptroller and his staff?

Mr. **Bowsher**. I don't think initially they should have known. But, I think as the years went by and they saw what was happening, it would have been better if they had come forward sooner.

Senator **Proxmire**. I understand the Pentagon uses the defense deflator to measure past inflation as well as in the forecast of the future inflation. Does the problem of the lag in price change apply to the measurement of past inflation? Is it likely that using the defense deflator exaggerates the estimates of past inflation?

Mr. **Bowsher**. I think some, but it is probably the best that's available at this point in time.

Senator **Proxmire**. Now you seem to favor using the rate of inflation of the general economy as measured by the GNP deflator on what should be allowed as the defense inflation. Isn't it true that inflation in defense, especially weapons purchases, may exceed inflation in the economy and has exceeded inflation in the economy in the past? If so, wouldn't we be shortchanging the defense program with the GNP deflator?

Mr. **Bowsher**. Well, I think that's a possibility and if you look back there in the 1970's it certainly was sometimes a case of the defense part of the economy was racing ahead faster than the general. But if you look at the recent years, it has been closer to general inflation and I think it's better to base defense inflation budgeting on a broad deflator factor that is not tied to defense. Hopefully, we're not going to have those large inflation years in the future.

Also, I think that if you built in some way of getting additional inflation, if it is needed after the fact, then I think it could be handled. But to be putting all that money in up fron, I think your best bet is to try to stick with a general index that is based more on the period we are in, rather than back in the 1970's when there were some problems with high inflation.

Senator **Proxmire**. As we've said, the defense deflator measures prices at delivery. If there were a second defense deflator that measured defense purchase outlay prices, would that not eliminate the lag problem and be a proper measure on defense outlays?

Mr. **Bowsher**. Yes. if you could do that and if we could build one like that, it would probably help overcome some of those problems.

Senator **Proxmire**. Now let me just spend a minute or two discussing the legislative proposal which I've circulated which you said you support.

The first step is to require a breakdown in the budget proposal of the inflation amounts requested by appropriation account. How much information does Congress now get about the inflation amounts in the defense budget and would a breakdown add to our knowledge?

Mr. **Bowsher**. Well, I think the breakdown would add to your knowledge by account and I think also it's important to try to tie it into those major weapon systems—in other words, the SAR reporting systems, because to a great extent that's what you're trying to look at in addition to all the other items that are in those appropriations. So I think it would give you great visibility over the inflation as related to the individual appropriations and to the major weapon systems within the appropriations.

Senator **Proxmire**. Now the second step is to limit how much can be spent for inflation and to earmark appropriations so that inflation funds cannot be reprogrammed.

How does earmarking work and what is the rationale for it in this case?

Mr. **Bowsher**. The earmarking works primarily by trying to make sure that inflation money is not used for just general program cost overruns or technical changes or things like that. In other words, what you're trying to do is to say that we will give you so much money for inflation but we don't want you to be using that money for just program changes you might say.

Now it's not easy to do this. In other words, this is not something that is very easy to do. But at the same time, it would get you started in getting a little better perspective on how this money is being used once you put it in there.

Again, as I say, if we could get a reporting system and accounting system over there to track the budget, I think we would be better off and maybe could handle it that way.

Senator **Proxmire**. What's the rationale for not letting them take excess inflation money and use it for other purposes?

Mr. **Bowsher**. The rationale basically is that the Congress has voted the funds for inflation purposes and you don't want to find out that you're funding other programs or program increases or changes in the program with inflation money that you put there for one purpose. You would like to see it then is being used for that purpose.

Senator **Proxmire**. Finally, the proposal requires the Secretary of Defense to report annually on how inflation funds are being spent and directs the GAO to do periodic audits and report to Congress on whether the inflation funds used do reconcile to the actual inflation experience.

How do you understand the purpose of these measures and would they provide assurance that the huge inflation dividends would be avoided?

Mr. **Bowsher**. I think they would go a long way to providing assurance. I don't think they would provide absolute assurance and I would like to make that clear, that I don't think that we really are trying to achieve that. But I think it would come close to providing a pretty fair way of putting the money in, reporting on it, and obtaining an audit trail. Hopefully, it might even encourage the defense officials to modernize their systems. I would think at that time we might even move to a simpler process in the inflation area.

Senator **Proxmire**. Thank you very, very much, Mr. Bowsher, and as I say, I'm very hopeful that you will continue working with us in the Congress. We rely on you greatly and you and your predecessors have done a great job.

Mr. **Bowsher**. Thank you very much, Mr. Vice Chairman, and we appreciate your support and the other Members of Congress support as we go though this Gramm-Rudman process. We are very anxious to help in any way we can in reducing the budget deficits, but we are anxious to also maintain our independence and our ability to do this type of work.

Senator **Proxmire**. Well, we will do our best to help you achieve those ends.

Mr. **Bowsher**. Thank you.

Senator **Proxmire**. Our next witness is Richard Ziemer, Bureau of Economic Analysis, Department of Commerce. Mr. Ziemer has been in on this inflation problem almost from the beginning. He is an outstanding expert and we are delighted to have you here, Mr. Ziemer. You can make a real contribution.

I understand you've been in charge of the defense deflator project.

Mr. **Ziemer**. Yes, sir.

Senator **Proxmire**. And you're probably one of the outstanding experts in the Government on this. Go ahead, sir.

STATEMENT OF RICHARD C. ZIEMER, BUREAU OF ECONOMIC ANALYSIS, DEPARTMENT OF COMMERCE

Mr. **Ziemer**. Mr. Vice Chairman, thank you for asking me to appear before you today to provide information on the implicit price deflator for national defense purchases of goods and services that is prepared by the Bureau of Economic Analysis.

Senator **Proxmire**. Mr. Ziemer, I wonder if you could summarize your prepared statement as much as possible. It's an excellent statement, but we have Robert Helm of the Defense Department following you and we would appreciate it if you could summarize.

Mr. **Ziemer**. Yes, sir. You had asked me three questions about the deflator: What purpose does it serve, how is it constructed, and what is its proper use?

If I may, just briefly, I would say the purpose of the defense deflator as we prepare it is to deflate defense purchases in the gross national product. It is part of the gross national product and consistent with its concept.

Then briefly, how is it constructed? I would like first to clarify the difference between an implicit price deflator and a price index. BEA prepares and publishes a fixed-weighted price index and an implicit price deflator for GNP and its components, including defense purchases and its subcomponents.

These measures are calculated from the same basic source data, but they are combined using different formulas and serve different purposes.

A fixed-weighted price index is calculated by using the same weights in every time period. Because it measures a fixed market basket, comparisons between any two time periods will reflect only price change.

A price deflator, however, is calculated using weights from each time period in the series. Therefore, when you compare time periods your answer will be influenced by a product mix and not only by price change.

Basically, the defense deflator is constructed using specification pricing techniques which are the same type of techniques that are used in most price indexes—the producer price index, the Consumer Price Index, and other price indexes.

In the defense deflator, replacement of an old weapons system by a new one presents special problems. The most important influence among these is what is known as the learning curve. A new weapons system is a very complex, highly technological item and initially prices of a new weapons system will be overstated relative to an older weapon system where a lot of learning has taken place.

To account for this difference, we try to price the 100th unit of a new system and compare it to the old system. Thus, there should not be a difference between the two systems that is represented solely by learning the production techniques for the new system.

This procedure assumes that any difference in price between those two weapons at that time is a quality difference.

The other important consideration with the defense deflator concerns timing of price change in the defense deflator series.

In GNP, weapons systems are not counted as a defense purchase until the item is delivered to DOD. This treatment means there may be a long lag between the time the DOD contracts for a weapons system and it appears as a defense purchase. This lag is approximately 2 years generally in aircraft. Any price change accompanying the system, then, will not appear in the GNP deflator until the delivery occurs.

Your third question, what is the proper use of the defense deflator? Its proper use is to deflate defense purchases in GNP. We do prepare a fixed-weighted price index for national defense and its components which more appropriately measure price change but they still are on a timing basis consistent with the GNP.

Thank you, Mr. Vice Chairman. I'll be happy to respond to questions.

[The prepared statement of Mr. Ziemer follows:]

PREPARED STATEMENT OF RICHARD C. ZIEMER

Mr. Chairman, members of the Subcommittee, thank you for asking me to appear before you today to provide information on the implicit price deflator for national defense purchases of goods and services that is prepared by the Bureau of Economic Analysis (BEA). Specifically, you requested a reply to three questions:

1) What purpose does the defense deflator serve?

2) How is the defense deflator constructed?

3) What is its proper use?

However, before I proceed with these questions, there are some important points that need to be clarified, namely, the differences between an implicit price deflator and the price indexes published by BEA. BEA prepares and publishes a fixed-weighted price index and a chain price index, as well as an implicit price deflator, for GNP and its components, including defense purchases and its subcomponents. The two price indexes provide measures of price change. The price deflator is an average of the detailed prices used in deflation weighted by the composition of purchases. Consequently, changes in the price deflator reflect not only changes in prices but also changes in composition. Although the fixed-weighted price index, the chain price index, and the implicit price deflator are calculated from the same basic source data, these data are combined using different formulae. They also serve different purposes.

The fixed-weighted price index is calculated using the same weights in every time period. This is known as the Laspeyres formula. Because the fixed-weighted price index uses a fixed market basket of items over time, the change between any two time periods will reflect only price change.

The chain price index is derived by calculating a price change for consecutive time periods using the Laspeyres formula and chaining the results together into a time series. This formulation also reflects only price change between any two adjacent time periods.

A price deflator, on the other hand, is calculated using weights that are current to each time period of the series. This is known as the Paasche formula and takes into consideration the shifting pattern of purchases over time. This formulation is used to "deflate" current-dollar defense purchases and other components of Gross National Product (GNP)—in other words, to remove the effects of price change from these components. The resulting constant-dollar figure is current period quantities purchased valued in base period prices. Therefore, changes in a deflator between two time periods, will reflect both changes in the mix of purchases and changes in prices, if the base period is not one of the comparison periods.

1) What purpose does the defense deflator serve?

The purpose of the defense deflator prepared by BEA is to deflate national defense purchases for inclusion in constant-dollar GNP. Prior to the development of this measure (and its related fixed-weighted and chain indexes), no data existed on price change of defense items. Existing price indexes did not cover military goods or services and were limited to transactions occurring within the private sector of the economy. BEA developed the measures necessary to deflate defense purchases based on actual defense price experience. These measures, beginning with 1972, were first included in the GNP with the release of the comprehensive revision of the national income and product accounts in late 1980.

The defense deflator is constructed to be consistent with the concepts of the GNP. Those concepts define exactly what is to be measured as defense purchases in terms of coverage and timing. In terms of coverage, defense purchases include the compensation of DOD employees and the purchases of goods and services from the private sector. Purchases do not include retirement benefits, interest payments, and loans. In terms of timing, purchases, with certain exceptions, are measured in GNP on a delivery basis, that is, when the goods and services are delivered to the government. In contrast, unified budget outlays for national defense are recorded on a checks issued basis and include progress payments for work performed on goods to be delivered later. I will come back to this timing concept later in my presentation.

2) How is the defense deflator constructed?

There are two major parts to any measure of price change: the price series themselves and the weights used to aggregate them. I will briefly explain how both of these parts are constructed in the defense deflator. Particular attention will be paid to the development of deflators for weapons systems.

Of major importance in the development of any measure of price change is the techinque used to construct the detailed price series that are weighted together to form the price deflator or index. In the defense deflator, specification pricing techniques are used to develop price series for each of the items selected for pricing. Detailed specifications are developed for each item, such as the airframe for an F-15, and items conforming to these exact specifications are repriced over time. When a specification is changed, the change is evaluated to determine how much represents a change in physical output or "quality." The price is adjusted to exclude the value of any quality change; specification changes that do not affect physical output are treated as price change. Specification pricing is the same technique that is used in the Producer Price Index (PPI) and the Consumer Price Index (CPI).

The sample of items that are priced for the defense deflator was selected from the full spectrum of defense purchases during the base period, currently calendar year 1982. Total defense purchases are broken down into 111 subcategories of goods and services. Within each subcategory, such as aircraft and missiles, individual items were selected for specification pricing. Wherever possible, data are collected on actual prices paid by the Department of Defense (DOD) for these items. The use of actual prices paid by DOD is a unique characteristic of the defense deflator because it accurately reflects the price movements experienced by DOD.

As long as the specifications for an individual item, such as the airframe for the F-15, are unchanged, any change in the price paid by DOD for that item is a price change. When a physical change occurs in an item, the change is evaluated to determine if it is a quality change. If it is determined that it is a quality change, the cost of producing that physical change is used as the value of that change and the price is adjusted accordingly. Any other change in the price paid by DOD for that item is price change.

The pricing of ships, because of the long construction period and because each ship is somewhat different, requires an alternative approach to specification pricing. The detailed configuration of a given ship, such as an attack submarine, is "frozen" in the base period. The cost of building that exact ship in later time periods is estimated. The cost is estimated based on changes in input costs--labor hours and rates, material prices, and overhead costs prevailing in a given time period. Any resulting change in cost is a price change, because the specification has remained unchanged.

A major problem is encountered in the development of any price index when a product disappears and is replaced by a new product. The new product will not match the specifications developed for the old product, and therefore, the price of the new product cannot be directly compared to the old. One method used to handle this problem is called a "link" procedure. Changes in the price of a new product are linked to the level of the price index for the old product. This procedure assumes that any difference in price level between the old and new product at the time of the introduction of the new product is due to a difference in quality. A second method is to treat the new product as a quality adjustment to the old product. This is done by evaluating any physical difference between the old and the new product to determine if it is a quality change. If it is a quality change, the cost of producing that change is used as the value of that change and the price is adjusted accordingly. The new price series can then be linked to the old series. Both of these techniques are used in the defense deflator as well as in the CPI and PPI.

The replacement of an old weapons system by a new one presents an additional problem in developing the defense deflator. In this situation, prices paid by DOD for initial purchases of a new weapons system are very high and drop dramatically due to the "learning" or "progress" curve. New weapons systems are highly sophisticated and require complex fabrication procedures. Early units of a new system are produced at high prices that drop dramatically as the producer learns more efficient production methods for the new system. Therefore, prices of initial units will be overstated relative to the old weapons system where significant learning has already taken place. To account for this difference, the price of a unit produced after significant "learning" has occurred, for example, the 100th unit is selected and is expressed in dollars of the period when the initial production contract was signed. For this unit, efficient production techniques are assumed to have been implemented for the new system. The price of this unit of the new system is then compared to a price of a unit of the old system delivered at that time. Any difference between these prices is then a quality difference and a link is established between the old and new systems. This procedure yields a quality difference between the old and new systems that excludes the impact of "learning".

The result of this process, is that in constant-dollar terms defense purchases of a given weapons system will not be affected by movement along the learning curve. In other words, if in two consecutive years, DOD purchases 30 F-15 airframes, and there were no configuration changes, constant-dollar purchases of this item would be the same in both periods.

The weights used to construct the defense deflator are the detailed purchases of goods and services that make up the 111 subcategories mentioned earlier. Other than for weapons systems, these weights represent outlays by DOD and other defense agencies in each time period. The weights are based on accounting data supplied by these agencies. The weights for weapons systems are based on accepted deliveries by DOD and not on the outlays for the systems. The difference between deliveries and outlays is progress payments, or the timing difference mentioned earlier.

This timing difference is of significance in understanding the defense deflator. Most importantly, the use of deliveries means that a price change is not reflected in the deflator until the item is delivered even though DOD will experience the price change when the progress payments are made. While this may be viewed as a problem, it is necessary and consistent in the development of GNP. To explain: As an aircraft is being fabricated, the manufacturer records the work in process -- that DOD pays for with progress payments — as inventory. That inventory is included in GNP. If the progress payments were also included in defense purchases, GNP would be overstated. When the aircraft is delivered to DOD, inventories decline and defense purchases increase and there is no effect on GNP. This results in the difference of timimg of price change in defense purchases and outlays.

3) What is the proper use of the defense deflator?

The remaining point to be discussed is the proper use of the defense deflator. The proper use of the defense deflator is to deflate defense purchases in the GNP. It is not designed, nor is it intended to be a measure of price change for other purposes, such as gauging the impact of inflation on defense outlays. As mentioned earlier, the defense deflator does not measure only price change; it reflects changes in both prices, and weights.

The fixed-weighted price index discussed earlier more appropriately measures price change because the weights are fixed; in this case, for 1982. Like the deflator, this index is constructed on the same conceptual basis, and is, therefore, not suitable as a measure of price change for other purposes. The various price measures that BEA constructs-particularly the fixed-weighted index--provide a historical record of price movements inherent in the goods and services purchased by DOD. However, caution should always be applied in the use of any historical measure as an indication of future movements.

I have attached, for the record, some of the tables published by BEA containing GNP and national defense purchases, as well as the deflators and fixed-weighted price indexes. I have also attached a bibliography citing publications where these concepts and measures are discussed in more detail.

Mr. Chairman, that concludes my prepared remarks. I will be happy to respond to any questions.

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Table 3.7B.—Government Purchases of Goods and Services by Type

[Billions of dollars]

	Line	1982	1983	1984	1985	Seasonally adjusted at annual rates															
						1982				1983				1984				1985			
						I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Government purchases of goods and services.	1	641.7	675.7	736.8	816.4	632.1	635.7	647.1	671.8	668.3	673.2	681.1	679.6	698.5	733.1	747.3	766.4	777.2	794.8	822.0	837.2
Federal	2	272.7	284.8	312.9	353.4	265.9	269.2	270.3	283.2	287.1	287.0	286.0	278.3	288.6	314.8	318.5	329.9	334.4	337.8	364.8	384.7
National defense	3	188.8	216.7	237.8	261.3	182.2	186.2	187.3	200.4	208.4	214.5	215.8	222.9	223.3	235.8	236.2	247.5	249.5	256.0	259.9	272.1
Durable goods	4	49.2	58.8	63.7	77.6	43.8	48.8	51.9	52.2	55.3	59.9	57.1	62.1	65.4	70.2	65.5	74.4	72.8	75.3	82.2	79.2
Nondurable goods	5	12.6	12.6	12.0	12.1	14.0	12.4	12.1	14.9	14.0	12.0	12.4	12.1	11.9	11.9	12.4	11.6	11.3	12.4	12.0	11.7
Services	6	127.1	133.5	151.1	168.4	121.8	122.7	128.0	133.0	135.8	138.2	141.3	142.8	145.4	149.1	152.0	158.1	160.5	162.7	167.2	175.8
Compensation of employees.	7	84.0	89.5	94.8	100.4	81.7	83.8	82.9	86.7	88.4	89.2	89.9	90.4	94.6	94.5	96.1	95.6	99.2	99.7	100.0	102.7
Military	8	56.6	60.2	63.5	67.2	55.1	56.2	56.6	58.5	59.3	60.1	60.5	60.8	62.8	63.2	63.7	64.0	66.4	66.7	66.8	69.1
Civilian	9	27.4	29.4	31.3	33.2	26.6	27.2	27.3	28.2	29.1	29.2	29.4	29.7	31.8	31.2	31.4	31.7	32.8	33.0	33.3	33.5
Other services	10	43.2	50.0	56.3	68.0	40.1	42.3	44.1	46.3	47.4	48.9	51.4	52.4	52.4	54.6	57.8	60.5	61.3	63.0	67.2	72.6
Structures	11	3.9	4.7	5.0	5.7	3.6	3.5	4.3	4.2	4.2	4.5	5.0	4.9	4.6	4.6	5.5	5.4	4.9	5.7	6.4	5.9
Nondefense	12	78.9	68.2	75.0	92.6	80.7	80.0	78.0	87.7	77.8	72.5	70.2	56.2	57.3	79.0	82.2	85.4	84.9	81.7	95.0	112.6
Durable goods	13	3.1	3.5	3.9	4.0	3.0	2.9	3.0	3.4	3.6	3.5	3.5	3.8	3.7	3.5	3.9	4.2	4.0	4.1	3.9	4.2
Nondurable goods	14	14.9	.5	3.0	17.5	17.2	6.6	14.1	21.5	18.1	4.4	.9	−12.5	−14.0	6.9	8.9	10.2	9.6	6.9	18.9	34.7
Commodity Credit Corporation inventory change.	15	9.2	−5.7	−3.6	11.7	10.9	1.2	9.0	15.5	4.4	−1.8	−6.2	−19.0	−19.8	.1	2.9	2.4	3.8	.3	12.8	30.1
Other nondurables	16	5.7	6.2	6.6	5.9	6.3	5.4	5.1	6.0	5.7	6.2	7.1	6.5	5.8	6.8	5.9	7.8	5.9	6.6	6.2	4.6
Services	17	54.3	58.4	61.9	64.2	53.4	52.5	54.4	56.6	57.5	58.0	59.8	60.4	60.7	60.8	62.4	63.6	63.6	63.1	64.2	66.2
Compensation of employees.	18	33.1	35.1	37.3	39.4	32.7	32.6	33.0	34.0	34.7	35.0	36.1	35.5	36.8	37.1	37.4	37.9	39.0	39.3	39.5	39.9
Other services	19	21.2	23.4	24.6	24.9	20.7	20.2	21.5	22.6	22.8	23.0	23.6	24.0	23.9	23.6	25.0	25.8	24.6	23.8	24.8	26.3
Structures	20	6.6	6.6	7.2	7.7	7.0	6.7	6.5	6.2	6.5	6.5	7.0	6.4	6.8	7.4	7.1	7.4	7.4	7.7	8.0	7.8
State and local	21	369.0	390.9	423.9	463.0	366.2	366.4	371.5	378.7	382.2	386.2	395.1	396.4	418.9	428.2	428.8	435.5	442.8	457.1	467.7	472.6
Durable goods	22	14.7	16.2	18.5	20.1	14.1	14.5	14.8	15.2	15.6	16.1	16.5	17.1	17.6	18.3	18.7	19.2	19.6	20.0	20.2	20.6
Nondurable goods	23	32.4	34.1	36.5	39.6	32.0	32.2	32.7	32.9	33.1	33.8	34.5	35.0	36.0	36.5	36.5	37.2	37.6	38.4	39.2	39.9
Services	24	277.2	297.2	321.4	347.4	268.6	275.1	279.9	285.2	290.1	294.5	299.4	304.8	311.6	318.4	324.5	331.0	337.7	344.0	350.7	357.2
Compensation of employees.	25	226.9	241.8	259.6	279.2	220.5	225.5	228.9	232.6	236.5	239.9	243.4	247.4	252.8	257.3	261.8	266.5	271.7	276.6	281.6	286.9
Other services	26	50.3	55.4	61.8	68.2	48.1	49.6	51.0	52.5	53.5	54.6	55.9	57.4	58.8	61.1	62.7	64.6	66.0	67.5	69.0	70.4
Structures	27	43.7	43.2	47.5	54.0	43.5	43.6	43.4	44.3	43.4	42.5	44.6	42.4	45.6	47.2	49.1	48.0	47.9	54.7	58.5	54.7

Table 3.8B.—Government Purchases of Goods and Services by Type in Constant Dollars

[Billions of 1982 dollars]

	Line	1982	1983	1984	1985	Seasonally adjusted at annual rates															
						1982				1983				1984				1985			
						I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Government purchases of goods and services.	1	641.7	647.2	675.9	716.4	634.8	629.7	642.0	660.1	649.1	640.2	651.5	642.3	660.1	677.1	682.4	683.9	691.4	699.4	729.2	745.6
Federal	2	272.7	275.5	292.5	322.6	267.0	260.5	272.8	289.5	279.2	277.6	277.4	267.9	271.1	294.8	294.7	307.3	304.2	305.8	321.1	340.0
National defense	3	193.8	207.3	220.2	235.7	186.4	191.6	197.0	201.4	203.8	208.0	206.5	211.8	214.1	219.6	219.6	227.9	228.7	231.5	242.3	241.3
Durable goods	4	49.2	56.4	64.6	71.6	48.9	49.2	51.4	52.3	52.7	57.7	54.6	59.7	61.9	66.0	61.6	69.0	67.9	69.6	76.5	72.4
Nondurable goods	5	12.6	12.5	12.3	13.2	13.9	12.4	12.1	15.0	14.6	13.0	12.2	13.2	12.6	12.1	12.6	12.9	12.4	13.6	14.3	12.8
Services	6	127.1	132.7	137.7	145.6	124.1	128.6	128.1	130.7	131.3	131.8	132.7	134.1	134.1	136.2	139.5	141.0	141.8	142.9	146.6	150.7
Compensation of employees.	7	84.9	85.2	86.3	87.2	83.2	84.6	84.2	84.4	85.3	85.2	85.3	86.0	85.8	86.2	86.6	86.7	87.1	87.2	87.4	87.3
Military	8	56.6	57.2	57.8	58.3	56.4	56.5	56.7	56.8	57.4	57.4	57.3	56.9	57.4	57.7	58.0	58.1	58.2	58.3	58.4	58.4
Civilian	9	27.4	28.0	28.5	28.9	26.8	27.4	27.4	27.6	27.9	27.9	28.0	28.1	28.4	28.4	28.5	28.6	28.8	28.9	28.9	28.9
Other services	10	42.2	47.5	51.4	58.2	40.8	42.6	44.0	46.4	46.0	46.5	46.4	48.1	48.3	50.1	52.9	54.3	54.7	55.7	59.2	63.3
Structures	11	3.9	4.6	4.7	5.3	3.5	3.5	4.3	4.4	4.3	4.5	4.9	4.8	4.5	4.2	5.1	5.0	4.6	5.2	5.9	5.4
Nondefense	12	78.9	68.2	72.3	86.9	81.4	68.9	75.9	88.2	75.4	70.6	70.9	56.1	57.2	75.2	77.1	79.5	77.6	74.3	87.9	107.7
Durable goods	13	3.1	3.0	4.1	4.5	3.1	2.9	2.9	3.4	3.7	3.7	3.7	4.0	4.0	4.0	4.1	4.4	4.4	4.5	4.3	4.7
Nondurable goods	14	14.9	2.1	4.4	19.6	17.1	6.1	13.1	23.2	9.9	3.0	4.1	−10.5	−9.4	8.1	9.0	10.8	9.6	6.9	19.6	36.1
Commodity Credit Corporation inventory change.	15	9.2	−4.2	−2.2	13.7	10.8	.7	7.9	17.3	4.1	−1.5	−3.2	−16.1	−16.2	1.2	3.1	3.2	3.8	.2	13.0	29.7
Other nondurables	16	5.7	6.3	6.6	5.9	6.3	5.4	5.1	5.9	5.8	6.5	7.3	5.6	5.8	6.9	5.9	7.6	5.8	6.7	6.5	4.4
Services	17	54.3	55.5	56.6	56.7	54.2	53.2	54.4	55.2	55.4	55.5	56.1	55.2	56.1	56.0	57.2	57.2	56.6	55.6	56.9	58.0
Compensation of employees.	18	33.1	33.6	34.0	34.3	33.1	32.8	33.1	33.2	33.3	33.5	33.5	33.6	33.7	33.9	34.1	34.3	34.3	34.3	34.4	34.4
Other services	19	21.2	22.4	22.6	22.4	21.2	20.4	21.3	22.1	22.1	22.1	22.6	22.7	22.3	22.1	23.0	22.7	22.3	21.4	22.3	23.6
Structures	20	6.6	6.6	6.9	7.1	7.1	6.7	6.5	6.2	6.4	6.5	6.9	6.3	6.6	7.1	6.8	7.1	7.0	7.1	7.4	7.0
State and local	21	369.0	372.2	383.2	393.8	367.7	369.2	368.6	370.6	369.9	370.6	374.1	374.3	378.6	382.4	385.7	386.6	387.1	393.6	396.1	399.5
Durable goods	22	14.7	15.6	17.7	18.9	14.2	14.5	14.8	15.1	15.4	15.6	16.2	15.6	17.0	17.6	17.9	18.4	18.6	18.8	19.1	19.2
Nondurable goods	23	32.4	34.9	36.9	38.8	32.9	32.4	32.5	32.9	34.2	34.7	35.3	35.5	36.2	36.7	37.1	37.7	38.1	38.6	39.1	39.4
Services	24	277.2	278.4	285.1	287.6	277.1	277.7	276.8	277.1	277.2	277.7	278.7	280.9	280.9	282.6	282.8	285.4	286.1	287.0	288.1	289.4
Compensation of employees.	25	226.9	226.5	228.2	229.6	227.6	227.7	226.2	225.9	225.8	225.9	226.3	227.9	227.4	227.3	228.3	229.9	229.1	229.2	229.7	230.4
Other services	26	50.3	52.2	54.9	58.1	49.6	50.0	50.6	51.2	51.4	51.9	52.4	53.0	53.4	54.6	55.2	56.4	57.1	57.7	58.4	59.0
Structures	27	43.7	43.9	45.6	46.4	43.3	43.6	43.4	44.3	43.2	42.4	44.3	42.0	44.6	45.6	46.9	46.1	44.3	49.2	51.9	48.4

7. Fixed-Weighted Price Indexes and Implicit Price Deflators

Table 7.1.—Fixed-Weighted Price Indexes for Gross National Product, 1982 Weights

[Index numbers, 1982=100]

	Line	1982	1983	1984	1985	Seasonally adjusted 1982 I	II	III	IV	1983 I	II	III	IV	1984 I	II	III	IV	1985 I	II	III	IV
Gross national product	1	100.0	104.0	108.5	112.4	98.2	99.4	100.7	101.7	102.5	103.5	104.5	105.6	106.9	108.1	109.1	110.0	110.9	111.9	112.7	112.9
Personal consumption expenditures	2	100.0	104.0	108.6	112.2	98.3	99.1	100.7	101.8	102.4	103.5	104.4	105.6	106.9	107.9	109.0	110.0	110.7	111.8	112.5	112.9
Durable goods	3	100.0	102.2	104.1	105.1	98.9	99.9	100.4	100.7	101.4	101.7	102.5	103.2	103.5	104.1	104.2	104.5	105.2	105.2	104.9	105.2
Nondurable goods	4	100.0	102.1	104.6	106.0	99.2	99.2	100.5	101.0	100.8	101.5	102.5	103.2	104.0	105.1	104.7	105.2	105.5	106.7	[illegible]	106.4
Services	5	100.0	105.8	111.7	117.1	97.4	99.9	100.9	102.7	103.9	105.1	106.2	107.5	109.4	111.0	112.7	113.5	115.0	116.4	[illegible]	119.1
Gross private domestic investment	6																				
Fixed investment	7	100.0	100.4	102.1	103.9	99.2	100.0	100.6	100.2	100.6	99.7	100.5	100.4	100.6	101.7	102.5	103.0	103.3	103.6	104.1	104.6
Nonresidential	8	100.0	99.6	100.8	102.7	98.8	100.0	100.7	100.5	100.2	99.5	99.8	99.6	99.7	100.4	101.1	101.6	102.0	102.4	102.9	103.4
Structures	9	100.0	97.2	99.2	101.8	99.6	100.2	100.7	99.4	98.5	96.5	97.0	96.8	97.2	99.0	100.0	100.8	101.0	101.5	102.0	102.8
Producers' durable equipment	10	100.0	101.5	101.8	103.2	98.4	99.6	100.7	101.1	101.4	101.4	101.5	101.5	101.3	101.3	101.8	102.2	102.6	103.0	103.5	103.8
Residential	11	100.0	102.3	105.4	108.3	100.5	100.2	100.4	99.1	102.0	100.4	102.2	103.3	103.8	105.4	107.5	107.8	107.7	107.9	108.2	109.6
Change in business inventories	12																				
Net exports of goods and services	13																				
Exports	14	100.0	101.6	104.6	104.4	99.7	100.1	100.1	100.0	100.6	101.0	101.7	103.2	104.0	105.1	104.8	104.4	104.4	104.6	104.2	104.2
Imports	15	100.0	97.7	97.6	95.0	101.4	100.0	99.2	99.2	98.7	97.4	97.5	97.2	97.7	98.1	97.6	97.1	95.9	95.3	94.5	94.8
Government purchases of goods and services	16	100.0	104.7	109.6	114.6	98.1	99.6	100.6	102.0	103.1	104.2	105.2	106.2	108.0	109.3	109.9	111.0	112.7	113.6	114.9	116.5
Federal	17	100.0	104.2	107.9	111.2	98.7	99.6	100.0	101.7	102.7	103.6	104.5	105.6	107.2	108.1	107.8	108.4	109.9	110.1	110.6	112.2
National defense	18	100.0	103.6	107.5	111.7	98.6	99.6	100.1	101.8	102.4	103.7	104.1	105.1	106.7	107.5	107.5	108.3	110.2	110.5	111.1	113.1
Nondefense	19	100.0	105.6	108.6	109.9	99.2	99.7	99.7	101.4	103.3	104.1	105.7	105.9	108.3	108.8	109.7	108.5	109.8	[illegible]	109.5	110.3
State and local	20	100.0	105.1	110.6	117.2	97.7	99.2	100.9	102.2	103.3	104.4	105.7	106.8	108.6	110.1	111.4	112.9	114.7	116.3	117.9	119.6
Addenda:																					
Final sales	21	100.0	104.0	108.4	112.3	98.2	99.4	100.7	101.7	102.5	103.4	104.4	105.5	106.9	108.0	109.0	109.9	110.9	111.8	112.6	112.7
Personal consumption expenditures, food	22	100.0	101.9	105.9	108.0	99.2	99.9	100.3	100.6	100.9	101.8	101.8	103.2	105.9	106.1	107.3	106.4	108.4	[illegible]	108.6	110.5
Personal consumption expenditures, energy	23	100.0	101.0	102.3	103.2	99.6	97.8	100.9	102.2	99.1	101.0	102.1	101.8	101.9	102.7	102.2	102.4	101.5	104.4	103.8	103.2
Other personal consumption expenditures	24	100.0	104.9	109.7	114.2	97.9	99.2	100.7	102.2	103.3	104.2	105.5	106.7	107.9	109.1	110.4	111.4	112.3	113.6	114.7	116.0

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 7.4.—Implicit Price Deflators for Gross National Product

[Index numbers, 1982=100]

	Line	1982	1983	1984	1985	Seasonally adjusted 1982 I	II	III	IV	1983 I	II	III	IV	1984 I	II	III	IV	1985 I	II	III	IV
Gross national product	1	100.0	103.8	108.1	111.7	98.2	99.4	100.9	101.7	102.4	103.2	104.1	105.2	106.6	107.6	108.6	109.6	110.4	111.3	112.1	113.0
Personal consumption expenditures	2	100.0	103.9	108.2	111.6	98.3	99.2	100.7	101.8	102.4	103.4	104.2	105.4	106.7	107.6	108.7	109.6	110.3	111.3	111.9	113.1
Durable goods	3	100.0	102.1	103.9	104.7	98.9	99.9	100.4	100.7	101.3	101.6	102.4	103.1	103.4	103.9	104.1	104.2	104.9	104.8	104.6	104.4
Nondurable goods	4	100.0	102.0	105.4	107.7	99.2	99.2	100.5	101.0	100.7	101.9	102.4	103.1	104.3	104.8	105.5	106.6	106.7	107.8	107.8	109.1
Services	5	100.0	105.7	111.5	116.8	97.4	99.9	100.9	102.7	103.9	105.0	106.2	107.8	109.2	110.8	112.5	113.5	114.7	116.1	117.4	118.7
Gross private domestic investment	6																				
Fixed investment	7	100.0	99.9	101.4	102.9	99.1	100.0	100.7	100.3	100.6	99.3	99.8	99.8	100.2	101.3	101.6	102.1	102.4	102.6	103.0	103.5
Nonresidential	8	100.0	98.9	99.4	100.9	98.7	99.9	100.8	100.7	100.1	98.9	98.2	98.4	98.8	99.2	99.6	100.1	100.5	100.7	101.0	101.2
Structures	9	100.0	97.2	99.2	102.7	99.6	100.2	100.7	99.5	98.7	96.9	96.9	96.4	97.2	98.9	99.8	100.8	101.8	102.7	102.8	103.4
Producers' durable equipment	10	100.0	99.9	99.5	99.9	98.2	99.7	100.8	101.3	101.1	100.0	99.1	99.5	99.6	99.3	99.5	98.7	99.6	99.6	100.1	100.1
Residential	11	100.0	102.2	106.4	108.4	100.5	100.2	100.4	99.1	102.0	100.3	102.2	103.1	103.6	105.5	107.6	107.9	107.7	107.9	108.2	109.7
Change in business inventories	12																				
Net exports of goods and services	13																				
Exports	14	100.0	101.4	103.7	102.8	99.7	100.1	100.1	100.0	100.5	100.6	101.4	102.7	103.5	104.2	103.8	103.2	102.9	103.1	102.7	102.4
Imports	15	100.0	97.5	97.4	95.5	101.4	100.0	99.3	99.2	98.7	97.2	97.6	97.1	97.5	98.0	97.3	96.7	96.0	95.7	95.3	94.2
Government purchases of goods and services	16	100.0	104.3	109.0	113.0	98.0	99.4	100.7	101.8	103.1	104.0	104.5	105.7	107.1	108.6	109.6	110.7	112.4	112.6	114.2	115.9
Federal	17	100.0	103.4	107.0	110.2	98.5	99.6	100.5	101.3	102.0	103.4	103.1	104.2	106.2	106.8	107.3	108.2	109.9	110.4	110.2	110.2
National defense	18	100.0	104.0	107.6	111.1	98.3	99.4	100.2	102.0	102.7	103.7	104.5	105.2	105.6	107.4	107.6	109.6	110.1	110.6	110.9	112.3
Nondefense	19	100.0	101.3	105.1	107.7	99.0	100.2	101.5	99.5	101.1	101.6	99.0	100.1	99.9	105.0	106.7	107.5	109.4	110.0	108.1	104.6
State and local	20	100.0	105.0	110.6	116.0	97.7	99.2	100.9	102.2	103.3	104.4	105.6	106.7	108.5	109.9	111.2	112.7	114.4	116.1	117.5	119.2

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 7.17.—Fixed-Weighted Price Indexes for National Defense Purchases of Goods and Services, 1982 Weights

[Index numbers, 1982=100]

	Line	1982	1983	1984	1985	Seasonally adjusted															
						1982				1983				1984				1985			
						I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
National defense purchases	1	100.0	103.8	107.6	111.7	98.5	99.6	100.1	101.8	102.4	103.7	104.1	105.1	106.7	107.6	107.5	108.2	110.2	110.5	111.1	113.1
Durable goods	2	100.0	104.0	108.9	111.0	98.2	99.4	101.1	101.3	103.0	104.0	105.5	107.1	107.4	109.2	109.1	110.0	111.4	110.2	111.2	111.1
Military equipment	3	100.0	105.8	110.4	112.6	98.0	99.3	101.2	101.5	102.8	104.7	106.7	108.4	108.6	110.7	110.6	111.7	112.0	111.7	113.0	112.9
Aircraft	4	100.0	111.9	122.3	124.4	95.6	99.1	102.4	102.9	107.1	109.7	114.6	116.4	117.5	123.5	124.0	124.2	125.6	121.9	123.0	127.2
Missiles	5	100.0	102.8	106.1	107.8	99.3	98.8	101.0	100.9	100.9	102.6	102.6	104.9	105.2	106.2	105.9	107.2	108.2	108.4	107.6	107.0
Ships	6	100.0	102.5	108.4	113.0	98.6	99.5	100.7	101.1	102.4	102.5	102.8	103.2	106.9	107.3	108.5	111.0	112.7	113.3	113.0	113.1
Vehicles	7	100.0	92.5	77.4	73.1	102.7	100.1	99.0	98.2	94.1	90.7	92.7	92.5	86.7	79.7	71.7	71.8	72.0	71.3	74.5	74.9
Electronic equipment	8	100.0	102.1	104.0	104.9	99.9	99.7	100.2	100.2	101.4	102.2	102.4	102.4	103.2	103.5	104.0	105.3	105.2	105.1	104.7	104.6
Other	9	100.0	102.3	101.9	106.6	99.1	99.5	100.4	101.0	102.6	102.7	101.0	102.0	101.7	100.7	101.1	104.1	106.4	107.2	107.1	105.7
Other durable goods	10	100.0	100.4	102.1	105.6	99.1	99.7	100.5	100.7	100.6	100.6	99.9	100.8	101.4	102.3	102.4	102.6	103.9	105.5	105.7	106.5
Nondurable goods	11	100.0	92.9	88.6	89.4	101.1	100.1	98.9	100.0	95.6	92.3	92.0	91.7	88.1	88.8	88.7	89.0	89.0	90.1	90.0	89.4
Petroleum products	12	100.0	88.6	82.3	79.2	102.6	100.3	98.0	99.1	90.8	87.3	87.5	88.8	81.6	84.2	82.5	80.9	78.4	79.7	80.0	78.9
Ammunition	13	100.0	104.2	106.7	114.2	96.4	99.2	101.4	103.0	104.0	103.2	104.1	104.1	101.9	104.4	109.2	111.6	113.6	114.4	114.4	114.5
Other nondurable goods	14	100.0	99.2	104.1	106.4	99.9	99.5	100.2	100.4	99.0	100.0	98.6	99.2	101.6	104.7	105.1	105.0	106.1	106.0	107.3	106.1
Services	15	100.0	105.1	109.7	114.4	98.2	99.4	99.9	102.5	103.4	104.9	105.8	106.5	109.3	109.6	109.6	110.5	113.2	113.8	114.2	116.5
Compensation of employees	16	100.0	105.0	109.8	115.1	98.1	99.4	99.7	102.8	102.7	104.7	106.4	106.4	109.6	109.7	109.9	110.3	112.9	114.4	114.5	117.4
Military	17	100.0	105.1	109.6	115.2	97.7	99.5	99.6	103.0	102.4	104.8	106.6	106.4	109.7	109.7	109.9	110.1	114.0	114.3	114.2	119.5
Civilian	18	100.0	104.8	109.6	114.9	99.0	99.2	99.5	102.3	104.3	104.6	105.0	105.5	109.3	109.7	109.9	110.6	113.8	114.5	115.0	115.9
Other services	19	100.0	105.2	109.5	113.1	98.2	99.5	100.3	102.0	102.9	103.2	105.5	106.6	108.7	109.4	109.1	110.9	111.7	112.8	113.6	114.3
Contractual research and development.	20	100.0	105.9	109.8	112.0	97.3	98.4	100.7	103.6	104.3	105.3	105.8	107.8	108.9	109.1	110.0	111.4	112.5	111.2	112.1	112.4
Installation support [1]	21	100.0	105.6	113.1	118.6	98.5	100.0	101.2	100.3	101.3	104.4	109.4	107.6	112.3	114.1	111.5	114.7	115.0	118.6	120.1	120.7
Weapons support [2]	22	100.0	107.8	111.0	113.2	96.3	98.1	100.8	104.8	107.2	107.2	108.0	109.1	110.4	110.6	111.2	112.5	112.1	113.4	113.2	113.2
Personnel support [3]	23	100.0	104.5	105.9	108.0	99.0	99.7	99.5	101.8	103.8	104.2	105.4	104.6	105.4	107.0	106.5	104.9	104.4	107.4	107.4	113.0
Transportation of materiel	24	100.0	98.8	99.0	104.9	102.7	101.7	98.6	97.0	98.2	97.2	98.4	96.3	97.2	98.5	99.3	101.3	102.2	104.3	105.9	106.0
Travel of persons	25	100.0	106.4	105.3	110.6	100.0	100.6	99.2	100.3	98.9	111.4	105.4	105.9	105.3	104.6	105.5	105.8	109.4	116.3	111.5	111.5
Other	26																				
Structures	27	100.0	101.2	105.5	106.6	101.9	100.3	98.6	99.2	101.3	100.2	101.8	101.7	103.2	105.4	106.3	107.4	106.1	106.2	106.4	109.5
Military facilities	28	100.0	100.9	106.2	108.2	101.2	100.3	99.5	99.0	101.2	100.2	101.3	101.1	105.1	104.9	105.9	107.5	106.4	108.0	107.6	108.8
Other	29	100.0	101.6	105.9	109.0	100.6	100.2	100.2	99.0	101.5	100.0	102.6	102.5	103.3	106.1	106.9	107.3	107.6	108.5	109.6	110.5

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1. Includes utilities, communications, rental payments, maintenance and repair, and payments to contractors to operate installations.
2. Includes depot maintenance and contractual services for weapons systems.
3. Includes compensation of foreign personnel, consulting, training, and education.

Senator PROXMIRE. Thank you very much, Mr. Ziemer. It was very helpful.

In your prepared statement you discuss the defense deflator and the lags or timing problems involved in measuring defense prices at delivery.

Can you expand a little on the lags involved in defense purchases, especially weapons and how the rest of the prices that go into the GNP deflator differ?

Mr. ZIEMER. Yes, sir. A weapons system, for example, an aircraft, has money appropriated, say in fiscal 1982. At that time, they will generally sign a contract. In the case of an ongoing weapons system, say an F-15—they would start making progress payments in 1982 and 1983 and possibly into 1984. This contract may be at a new price level but that would not appear in our data until the first delivery from that contract, say in 1984.

Thus, they would have had to have the money budgeted in 1982 for a new price level that we would not reflect until 1984.

Senator PROXMIRE. Is it correct to say that the GNP deflator does not have much of a lag problem because most transactions measured are short term, but the defense deflator does have a lag problem because many weapons purchases are long term?

Mr. ZIEMER. As a general statement, one could say that, yes. I would like to point out that there are some things, for example, automobiles, that are a part of the GNP deflator. When General Motors has to pay more for the steel, that cost increase doesn't get reflected in the GNP until the consumer buys the automobile at the new price level.

Senator PROXMIRE. The overwhelming number of transactions in the GNP deflator are short term, right?

Mr. ZIEMER. Right.

Senator PROXMIRE. They tend to overwhelm these long-term elements as far as the GNP deflator is concerned?

Mr. ZIEMER. Yes.

Senator PROXMIRE. In your view, as an expert, would it be inappropriate to use the defense deflator to forecast the anticipated effects of inflation on defense purchases and, if not, why not?

Mr. ZIEMER. Given the timing problems with regard to forecasting price change for defense outlays, it is inappropriate. But if adjustments could be made to the numbers to put them on the same timing, basis, I believe it is an unbiased measure of the price change.

Senator PROXMIRE. Would it also be inappropriate to use the defense deflator to measure the effects of inflation on past defense purchases? Please explain why?

Mr. ZIEMER. Defense purchases as we define them in the national accounts with the timing lag; it is the appropriate measure.

Senator PROXMIRE. It is appropriate?

Mr. ZIEMER. Yes.

Senator PROXMIRE. OK.

Mr. ZIEMER. If you are using a historical series of outlays for weapons systems; there is the timing problem on the outlays.

Senator PROXMIRE. So it would be inappropriate to use it.

Mr. ZIEMER. It would be inappropriate to directly apply the defense deflator to the outlays series because of the timing problem.

Senator **Proxmire**. Is that what you mean when you say in your prepared statement that the defense deflator is not designed nor is it intended to be a way to gauge the impact of inflation on defense outlays?

Mr. **Ziemer**. Correct.

Senator **Proxmire**. Now did you or your colleagues at the Bureau of Economic Analysis ever advise the Pentagon comptroller's office not to use the defense deflator in the forecast of defense inflation for the measurement of past inflation and were they aware of your views about this?

Mr. **Ziemer**. We have talked to people in the comptroller's office about what our numbers are and they have our published methodology.

Senator **Proxmire**. And you've given them this view that you give us here this morning, that it's not appropriate to use the defense deflator in the forecasting of inflation?

Mr. **Ziemer**. Yes, we have told them what the problems are with doing that.

Senator **Proxmire**. Is it true that one of your former colleagues at the Bureau, Robert Shue, went to work for the Pentagon comptroller's office several years ago and is he familiar with the defense deflator and aware of its use?

Mr. **Ziemer**. Yes.

Senator **Proxmire**. Now it's the view that the Congress originally contemplated two deflators, one for the GNP accounts which is what you publish, and a second one based on defense outlays. Was the purpose of the outlays deflator to measure the effects of inflation on defense outlays?

Mr. **Ziemer**. Correct.

Senator **Proxmire**. Why was the outlays deflator discontinued and what would it cost to get it published?

Mr. **Ziemer**. Some budget constraints were put on the Bureau and we dropped the outlays measure because it is not necessary for producing the GNP data.

Senator **Proxmire**. Did you develop an outlay deflator before it was dropped?

Mr. **Ziemer**. Yes, sir. We had one for a short period of time. We published it in the formal report after we initially completed the project.

Senator **Proxmire**. The cost of doing this is really infinitesimal, isn't it? I mean, when we're talking about billions of dollars, this is a tiny fraction of one-tenth of 1 percent of the cost of what you're measuring.

Mr. **Ziemer**. Yes, sir.

Senator **Proxmire**. It's my understanding it's a few hundred thousand dollars—less than that, probably less than a hundred thousand dollars, one of two people.

Mr. **Ziemer**. It would take a couple of people working a year or so to set it up and get the computer programming done. It would probably take one or two people to maintain it. Again, a lot depends on how much detail is wanted in the answer.

Senator **Proxmire**. Now in view of the limitations in the present defense deflator, what would you suggest to improve the way past defense inflation is measured? That is, the effects of inflation on defense outlays?

Mr. ZIEMER. I would suggest that an outlays deflator be constructed. A series that is appropriate to deflate the outlays as the Defense Department spends the money. This can be done.

Senator PROXMIRE. What's wrong with using the GNP deflator as a measurement?

Mr. ZIEMER. There is no evidence that price changes of defense purchases, particularly in the major weapons area, are related to price changes of GNP. All the evidence we do have from our numbers indicates that there is a difference in the price movement between the weapons systems and the economy as a whole.

Senator PROXMIRE. Thank you very much, Mr. Ziemer. We very much appreciate it. As I said, you're an outstanding expert who's done a lot of very, very useful work in this area and we're grateful for it.

Mr. ZIEMER. Thank you.

Senator PROXMIRE. Our final witness this morning is Robert Helm, Comptroller of the Department of Defense. Mr. Helm, we're happy to have you this morning. I'm delighted to say that you're a fellow Badger.

Mr. HELM. That's right, Mr. Vice Chairman.

Senator PROXMIRE. From La Crosse, WI.

Mr. HELM. Right.

Senator PROXMIRE. That's why you're so outstanding.

Mr. HELM. As a matter of fact, I believe the last time we shared a forum was about 18 years ago when you spoke at La Crosse Central High School and I was a panelist.

Senator PROXMIRE. You were a student then?

Mr. HELM. I was a student.

Senator PROXMIRE. La Crosse has many fine products, including old-style lager.

Mr. HELM. That's right. It's hard to find here.

Senator PROXMIRE. Please proceed, Mr. Helm.

STATEMENT OF ROBERT W. HELM, COMPTROLLER, DEPARTMENT OF DEFENSE, ACCOMPANIED BY JOHN BEACH, DIRECTOR OF PLANS AND SYSTEMS

Mr. HELM. Mr. Vice Chairman, I'm here today in response to your request that I address a number of questions related to the subcommittee's inquiry into the subject of defense inflation. I have submitted a prepared statement. I would like to ask that be entered into the record.

Senator PROXMIRE. It will be entered in full. We would appreciate any summary.

Mr. HELM. Thank you.

I would like to make some comments perhaps to address some of the statements that have been made already by some of the previous witnesses and help clarify the issue. It's my hope that I can help correct some of the misstatements, misrepresentations, and errors of facts that have surrounded this whole subject of defense inflation lately. I think few topics have been more poorly understood of late than the process by which the Department tries to adjust for the impact of inflation.

I should add I'm accompanied by Mr. John Beach, who's the Director of Plans and Systems on my staff and who is the Department's technical expert on inflation issues.

This is a very complicated subject, Mr. Vice Chairman. It involves very complex financial and statistical issues. And what I hope I can do is help us cut through to the core of what the proper concerns and objectives should be.

Until a few years ago, defense inflation was the sole preserve of defense oversight committees most directly charged with following the financial details of the Pentagon. By that, I mean the Defense Appropriations Subcommittees, Mr. Vice Chairman, of which you are a member in the Senate.

Inflation was dealt with very effectively in this way. The defense appropriation process has visibility of the status of all defense funds and via the Defense Appropriations Subcommittees, the Congress was able to determine the proper use of defense funds that were no longer required for the purposes they were appropriated.

Now the recent focus on reducing the deficit has led to a widespread examination of defense financing by those evidently unfamiliar with the standard procedure of budgeting for a particular inflation assumption, executing a program in accordance with real world inflation experience, and dealing with any resulting surpluses or deficiencies according to established congressional procedures.

In recent years, inflation has decreased farther and faster than any economic forecaster that I am aware of has ever said would be likely, and everyone is glad this has happened. Everyone in the country benefits from this. The dollar goes farther and things don't cost as much.

The budget of every element of government, the Department of Defense, the General Accounting Office, even this subcommittee's operating budget benefits from this fact and buys more. In most cases, this additional purchasing power is used and everyone is glad their budget goes farther than expected. At least I'm not aware that anyone has asked GAO what it did with its inflation dividend or asked Mr. Bowsher to return funds to the Treasury.

It is only the case with the defense budget where significant amounts of inflation funding associated with procurement appropriations in particular can be identified as no longer being required for the purposes for which they were appropriated and where the Congress has the opportunity to recoup and reuse the results of more favorable economic conditions.

Despite this, the last year or so has seen repeated statements that DOD is squirreling away excess inflation funds or creating slush funds. This makes for colorful phraseology, Mr. Vice Chairman, but it is simply incorrect.

DOD has no free will as to how funds are spent. Funds can only be used for the purposes for which they were appropriated. If lower inflation frees some sums in an account, DOD must follow approved congressional procedures to reprogram and thereby use such sums for other purposes. Congress may itself transfer previously appropriated amounts to new programs. Any funds not approved for an alternative use by Congress will simply sit where they are, unusable, until they lapse and are in effect returned to the Treasury unspent.

Squirreling away inflation in this day and age simply cannot happen. The whole implication is illogical, as a matter of fact, from the DOD's standpoint. We have an interest in applying as much of our top line allocation as possible for real defense programs and funds for inflation make no contribution to enhance national security. So we have absolutely no interest in allocating more funds for inflation for a particular program than is required. We would prefer to put it on program and ask Congress to buy more defense program for a given defense allocation of dollars.

Now with that prelude, Mr. Vice Chairman, I would like to turn briefly to the five specific questions which you asked me to address in your letter to me.

The first one is, what assumption about inflation should be used in DOD budget proposals?

In our view, the major assumption that should be used is that all expected inflation be funded. This is key to the full-funding concept for defense which Congress and DOD strongly support. To adopt some budget concept which leaves all or part of defense inflation unfunded amounts to incremental funding and this is something the Congress has been vehement that not happen. It has all the attendant risks—

Senator **Proxmire**. Mr. Helm, let me just interrupt for a minute to ask, I'm puzzled by the attitude that you have here. You seem to feel that defense, if anything, gets less of a break than the rest of the society does and the rest of the Government gets. The way we fund pensioners, the way we fund workers and so forth, is based on what the past inflation rate has been. There was a big struggle, as a matter of fact, with the Federal employees because they didn't even get that. As you know, because of Gramm-Rudman, Congress made a reduction in what they get as a part of inflation.

Mr. **Helm**. That's right.

Senator **Proxmire**. Now for defense you get it in advance and in advance the estimates, as I say, consistently, year after year, every year for the past 5 years, have been in excess of what the actual inflation rate turned out to be.

Mr. **Helm**. My point, Mr. Vice Chairman, is if the estimate is in excess of what actual inflation turns out to be, DOD is not in a position to use those funds on its own initiative. It has to come back to Congress and ask for approval to use those funds for a purpose different than for what they were appropriated. That seems to me to be the essence of the issue.

There is a perception that somehow DOD is getting access to funds which Congress never intended it to have.

Senator **Proxmire**. As every witness up to this point has indicated—not everyone—I suppose Mr. Ziemer didn't—but the other witnesses certainly indicated that through reprogramming and a permissive reprogramming policy that you're getting more than Congress intended or provided in the authorization and appropriation measures we passed.

Mr. **Helm**. Well, I certainly would not agree that the reprogramming procedures are permissive. We find them very stringent. They are very tight and we follow them very closely and we hear from the Appropriations Committees very quickly if we don't follow the process.

In my view, Mr. Vice Chairman, the approval of reprogrammings by Congress amounts to the Department receiving approval to use funds.

Senator **Proxmire**. The point made by Senator Pryor was that there's no approval by the Congress. The approval is by a few Members of Congress, most of whom are very sympathetic with your operations—the chairman of the Armed Services Committee, the chairman of the Appropriations Subcommittee, and so forth. And on the basis on the record, as Senator Pryor was able to show I thought, you have been getting literally billions of dollars every year above what Congress specifically provided through the inflation dividend.

Mr. **Helm**. Well, Senator, I'm not here to criticize the congressional reprogramming process. It is not a process we invented. It's a procedure which Congress has leveled on us for dealing with funds throughout their life of availability. And if some funds are freed up or not needed for the purposes they were originally appropriated, nothing is going to happen to them until we come back via the procedures that Congress has laid down.

Now Congress' procedures for requiring reprogramming is Congress' business. We follow the rules. We try to follow them very closely and abide by the guidelines that our oversight committees lay down for us.

Senator **Proxmire**. But why should you get this inflation payment in advance? Why shouldn't you do as almost everybody else does it and get it after the fact is established and then be compensated so you in turn can compensate your contractors?

Mr. **Helm**. Well, my suspicion is, Senator, that we probably wouldn't get the inflation and that would destroy the full-funding concept that we so strive to protect, to ensure that we don't engage in incremental funding. Coming back for dollars of extra money on the basis that inflation requires it is not a very popular or advantageous position to be in. In the past and indeed the use of the special defense major procurement deflator was in part a response to the fact that we were underfunded for inflation in the past.

Senator **Proxmire**. It seems to me that we would respond if you could make a legitimate case undoubtedly. All the Members of Congress I know about are concerned about our national defense and national security. We recognize the sanctity of a contract. We recognize that we can't expect people who are building aircraft carriers or ships or missiles or whatever can carry the inflation burden by themselves. They have to be compensated. But you have millions and millions of retirees who have to wait. You have people who work for the Federal Government who have to wait, people who work elsewhere who have to wait until the inflation rate is established and then get just that inflation rate and no more. Getting it in advance is quite a privilege.

Mr. **Helm**. Well, Senator, in terms of the congressional budget process and the method by which Congress goes about allocating a certain amount for national security, inflation in one sense is sort of a wild card. When the fiscal year 1987 budget resolution allocates $292 billion for defense for fiscal year 1987, it's my assumption that Congress wants as much defense as possible purchased for that $292 billion, irrespective of what inflation is. The point is, that was the allocation of the total budget for national security that was endorsed in the congressional budget resolution and we should strive to buy as much program as possible for that allocation.

Now if inflation turns out to be lower than the budget was originally estimated—and it's a technical process of picking the right deflator to use—in the end, as recent events have shown, every forecaster has been off base in what actual inflation will be.

Senator **Proxmire**. As the last 10 years have shown, they've always overestimated.

Mr. **Helm**. No, sir. I think prior to 1982 we have experienced more inflation in major weapons areas than the GNP would have indicated was the case.

Senator **Proxmire**. Our record shows that 9 out of the last 10 years the Defense Department and the Congress over-estimated the inflation for defense. Only 1 year. That was the year in which the economist who made the overestimate was fired.

Mr. **Helm**. I know of no such economist, Mr. Vice Chairman.

My information is that in 1982 and prior we budgeted under the actual inflation rate.

Senator **Proxmire**. Between 1982 and 1986, the Defense Department's own figures show a $35.8 billion——

Mr. **Helm**. Excuse me. 1981. In 1981 and prior. In 1982 to the future, inflation has been dropping below the calculated rate, but in 1981 the forecast rate was 8.9 percent for DOD purchase inflation and the actual rate was 12.7 percent. In 1980, we forecast 7 percent and the actual rate was 14.7 percent. Those were significant experiences in not having enough budgeted for purchase inflation. It leads to incremental funding. It disrupts programs. It leads to a lot of the inefficiencies in terms of stretchouts and not getting the most for the dollar and it's what led to the desire for the full-funding concept.

Senator **Proxmire**. I don't want to be partisan about this, but 1981 was an interesting year. It was the year in which President Reagan took office and in which Secretary Weinberger took office and in which we had a program of a very big buildup of the Defense Department, and every year during that big buildup, every 1 of the 5 years in which your administration has been in office, we've had a very serious overestimate of inflation. Isn't that right?

Mr. **Helm**. Inflation has in recent years been lower than what was estimated, that's right. But it's also been lower than every private forecaster has predicted as well, Mr. Vice Chairman.

Senator **Proxmire**. Well, go ahead. I have some other questions when you finish. I apologize for the interruption.

Mr. **Helm**. OK. As I was saying, the full-funding concept is the best assumption we feel to use to make sure that all of the projected costs, by whatever index one chooses—and the administration has chosen an index and the only goal is to make sure that we fully fund the program that we request in our annual budgets.

Now the best index of real defense costs should be used and for DOD general purchases this has been the GNP deflator. Since 1983, the Commerce Department's BEA index has been used as the best measure of costs of major weapons systems—that's ships, tanks, and aircraft procurement area.

As a matter of fact, Senator Proxmire, I think in some sense you are regarded as one of the founding fathers of this concept of the special major defense procurement inflation index in 1975. You and Senator Stennis wrote to the BEA recommending construction of the military index so that the effects of economic inflation on defense purchases could be accurately measured.

CBO has confirmed that inflation has run higher for defense purchases as well as some outside observers like the Data Resources, Inc. (DRI), and Coopers & Lybrand. In 1983, DOD did receive permission from OMB to use the BEA index in pricing major weapons systems.

Now funding defense inflation is a straightforward requirement, as I've said, to fulfill the full-funding concept, and there is great danger in burdening it by complicated schemes which could only add delay and uncertainty to the program execution process.

The only implication of misestimating inflation and allowing more in the defense budget than is required to execute the program is that Congress will have another opportunity to decide what to do with such funds via the reprogramming process.

And I should point out, Senator, contrary to some of the things that have been said this morning, the reprogramming process is very formal. It is not a casual thing. Hearings are held by the Defense Armed Services and Appropriation Defense Subcommittees on reprogrammings. The Department comes before these committees to justify them. I can't imagine how a reprogramming could be managed over the telephone. There is paper and correspondence.

Senator **Proxmire**. Mr. Helm, I've been on the Defense Appropriations Subcommittee when you were in high school all the way through, and I've never yet—and I attend every subcommittee hearing I possibly can. I attend virtually all of them. And I have yet to see a single time when a reprogramming came before the subcommittee. It goes to the chairman and the ranking member. Very often they turn it over to their staff and that's it. It's not done by the committee. It's not done by the subcommittee. It's not done by the Congress as a whole. I say that on the basis of experience on the Defense Appropriations Subcommittee as long as anybody in the Congress with the exception of Senator Stennis.

Mr. **Helm**. I may have overgeneralized, Senator. The House Defense Appropriations Subcommittee does hold regular hearings on reprogrammings.

Senator **Proxmire**. Every single reprogramming?

Mr. **Helm**. I can't say on every single one, but we are periodically asked to come up to testify on groups of reprogramming requests.

Senator **Proxmire**. Even there—and I wouldn't challenge your word. You certainly may be correct. But it's hardly—it's one thing to have a subcommittee pass on a reprogramming and it's something else when these involve billions of dollars as they do to have it handled by the Congress as a whole.

By and large, the members of the subcommittee and the members of the committee—with some exceptions—are very supportive of the Defense Department. They're critical in some ways but by and large they are supportive, more than the Congress as a whole.

Mr. **Helm.** Well, my intention is not to argue with you about the reporgramming procedures. The only point I wanted to make, Senator, was that the rules exist for us to deal with as they are laid down by our oversight committees. It's Congress' business to determine how best it wants to deal with this.

Senator **Proxmire.** I would agree and I think that's a very good point. If there's a fault here, it's probably not primarily the fault of the Defense Department. It's the fault of the Congress. We're not doing the job we should do. That's why I'm introducing legislation here and why Senator Pryor has suggested that we should give very serious consideration to having at least above a certain limit action by the Congress as a whole on any significant reprogramming.

Mr. **Helm.** You are correct, it's Congress' business, Senator. We have not voiced a criticism of the existing procedures. The only comment I would make is that you are talking about a very labor-intensive process if you're proposing that the number of reprogrammings that have to be dealt with be brought to the full Congress for votes periodically. It would be a very bureaucratic-intensive process within the Congress itself. But that's something for Congress to consider.

Your second question was, is the present system for forecasting defense inflation adequate? In our opinion, it is adequate. There are four major components to defense inflation—military and civilian pay, general purchases inflation, major procurement inflation, and fuel.

Military pay increases are a matter of policy based on considerations of comparability with the private sector and the continued viability of the all-volunteer force.

General purchases inflation is funded at the GNP index rate.

Major procurement inflation may exist as an additional increment to the GNP rate based on the BEA index.

Fuel cost increases are estimates based on current and historical market experience.

DOD makes changes in these assumptions as events dictate. For example, as has been noted and the BEA index indicated that major weapon system costs had been brought under control to the point that a special additional factor above GNP was not needed in fiscal year 1987 and the administration's request does not deal with such an index in fiscal year 1987.

We hope this situation will persist and that DOD will not have to return to special index in the future. However, we believe the concept of a special deflator recognizing that costs in major weapons areas may run higher than GNP is a sound one and DOD would plan on asking Congress to return to a higher deflator if in the future the data indicated that this was required.

Now your third question is, would it have been possible to have avoided the so-called inflation dividend problem of the past several years?

As I've stated already, Mr. Vice Chairman, in my opinion, the only real problem has been the allegations that have surrounded this subject of late involving deliberate attempts to squirrel away money and create slush funds and all sorts of things like that.

As I've tried to point out, the dividend has been Congress' to deal with and I do not believe that being able to provide more defense capability for the same costs as was allocated by Congress can be called a problem. As I said, there seems to be a concern that we are getting funds which we were not intended to have and, as I pointed out, the congressional budget resolution—I was a member of the Senate Budget Committee staff for several years and worked with the defense budget. The allocations derived for defense are based upon macroeconomic assumptions. There is an inflation assumption contained implicitly in the budget resolution. They basically work on a level of effort calculation generally focusing on real growth.

But in no sense do the budget resolution allocations purport to be program level decisions. The levels that we get do not cover all of our defense requirements. The Defense Authorization and Appropriations Committees will have to cut things from the President's request that they would rather not in order to hit the targets. The Appropriations Committees have always wanted to know whether unneeded inflation funds were available to purchase the maximum program possible and DOD has always made that information available in the past, based on inquiries from the Appropriations Committees' staffs.

Now with the advent of Gramm-Rudman-Hollings and more binding budget targets, the Budget Committees and Armed Services Committees have also wanted to know about any such financing adjustments.

Last year, as Mr. Bowsher noted, there was a lot of indignant criticism when the Department suggested that the Armed Services Committee might utilize $4 billion of prior year funds not needed for the purpose they were originally appropriated to authorize as much program as possible.

The Appropriations Committees were already aware of this economic adjustment. Frankly, they were somewhat chagrined to see the authorizing committees getting into this traditional financing adjustment.

However, even after shooting the messenger, Mr. Vice Chairman, which happened to be me at that time, the Congress did choose to use all of that $4 billion to buy more program and the result was a strengthened defense posture with no increase above amounts previously allocated.

DOD is now required by law to submit a report to Congress three times a year identifying inflation and other budget adjustments. On top of the 670-some reports that we annually submit, we are happy to provide yet another one. It's important that Congress have this information.

Now, Mr. Vice Chairman, you can be sure that DOD has no interest in allocating more money to inflation than is needed. As I said, our only interest is in ensuring full funding. Within the top line we get from the President, we would prefer to place as much on program as possible, just as I assume Congress desires to get the maximum program out of the budget resolution amount.

Funding that is locked up to cover an overestimate of real inflation makes no contribution to defense. As I said, DOD must then go through the reprogramming procedures if it wants to have access to those funds or Congress may choose to use those funds via transfers in other legislative adjustments.

Economic forecasting is an imprecise discipline as yet and no one has been awarded the Nobel Prize for being able to accurately predict inflation 10 to 18 months ahead of time.

Senator **Proxmire**. Mr. Helm, how much more material do you have? You're reading from a document I don't have and haven't seen.

Mr. **Helm**. These are just some notes that I had put together, Mr. Vice Chairman, but I would be glad to stop right now if you so desire.

Senator **Proxmire**. Let me just ask you a few questions then.

[The prepared statement of Mr. Helm follows:]

PREPARED STATEMENT OF ROBERT W. HELM

Introduction:

Mr. Chairman and members of the subcommittee, I am pleased to have this opportunity to be here today to discuss the impact of inflation on the defense budget.

During the past 15 years, budgeting for inflation in defense has occupied much attention. In the early to mid-1970s, when energy-led annual inflation rates reached double-digit proportions, actual rates were generally higher than budgeted rates. This gap began eroding our already low levels of defense spending. When the second round of petroleum price increases hit during the 1979-81 period, the situation had become intolerable for the defense budget. Not only were we not getting the defense program required by the realities of national security, but we were not even getting the defense program the Congress had approved.

This Administration projected that inflation would be reduced. However, many thought that we would continue to experience 8 to 10 percent inflation for quite some time and regularly asserted that the defense program was underpriced and would not buy the weapons requested. Today, inflation rates are at levels even lower than we projected, and those who criticized DoD for underbudgeting now criticize us for overbudgeting for inflation. Throughout all these dramatic swings our primary inflation concern remained the same; to budget neither on the low side nor on the high side, but to establish budgeting procedures that ensured the full funding of our programs.

My purpose today is to answer the questions you have raised and to provide an understanding of defense inflation during the 1970s and 1980s as well as the steps we have taken to ensure that our budgets are priced as accurately as possible.

The Situation in 1981:

In 1981, it would have taken a very brave person indeed to have projected publicly the levels of inflation we are experiencing today. At that time even the Administration's assumptions about inflation, which most criticized as too optimistic, were higher than current levels. In fact, some even accused us of knowingly underfunding our programs by using unrealistically low estimates of future inflation.

The Congress was very much involved in this discussion. For example, the Legislation and National Security Subcommittee of the House Committee on Government Operations held hearings on the "Effect of Inaccurate Inflation Projections on DoD Budgets." The consensus of the witnesses from CBO, GAO, and DoD, as well as that of members of the committee, was that defense inflation was rising faster than that of the rest of the economy and that inadequate inflation funding would jeopardize successful completion of the Administration's defense program (Chart 1). We had been spending more and more money on defense procurement and we were getting fewer and fewer defense systems--ships, planes, and tanks. The unit cost of defense equipment had been growing much more rapidly than general inflation indices and aging defense capital stock was not being upgraded and replaced.

GNP DEFLATOR PROJECTIONS as of February 1982
(annual percent change)

	CY81	CY82	CY83	CY84	CY85	CY86
Private Forecasters:						
DRI	10.4	9.6	9.0	8.1	8.7	8.5
Chase	10.2	9.1	7.6	7.6	7.4	--
Evans	10.0	8.8	8.4	8.4	7.5	6.6
Merrill Lynch	9.5	7.1	5.9	6.1	--	--
Administration Projections:						
1982 Budget	10.5	9.3	8.5	7.8	7.0	6.3
CBO:						
Baseline Projections	10.3	9.2	8.6	8.1	7.6	7.1
ACTUAL:	9.6	6.4	3.8	4.1	3.3	

Source: CBO

Chart 1

In order to budget perfectly for future inflation, we would have had to use inflation rates that would have been considered by almost everyone as completely unrealistic. We would have been sharply criticized by many of the same people in the Congress who were already criticizing us for too optimistic rates.

Therefore, it is not surprising that we were enthusiastically supported in our plans to budget our weapon systems to most likely cost. The objective, which was supported by private analysts as well as many in the Congress, was to protect our programs against the ravages of what was believed to be a continuing trend in high inflation, not to "pad" our budget as some have been saying for the past year. If actual inflation turned out to be lower than we budgeted, our programs would be fully funded and we would be able to return or reapply the "savings" resulting from this good fortune.

The Situation Today:

Since 1983 the Administration has had remarkable success in reducing inflation to a range of two to three percent. As the rate of inflation in the general economy has declined, DoD has shared in the benefits of this success. That is the good news. The bad news is that the Department has not received credit for its sound policy and good management. Rather, it has been criticized from all sides for "padding" its budget and receiving a "windfall" of inflation dividends from this success story.

Current procedures have not led to windfalls for defense due to overfunding as inflation falls, as some critics contend. The Department has reduced its budget year after year by substantial amounts as the success story with inflation unfolded. In addition, the Department has made mid-course corrections consistent with the Administration's annual Mid-Session Review of the total budget. As inflation has declined, we have been able to fully fund our programs and achieve savings. These savings have been identified and either returned to the Treasury or reapplied to higher priority programs, often at the behest of the Congress. This is sound management of our defense resources.

This recent downward trend in inflation has not produced an "inflation dividend problem." We welcome this decline in inflation and believe, as I am sure you do, that whenever inflation savings occur, they should be identified. If it were possible to project perfectly 12 to 18 months ahead what the impact of inflation would be on the defense budget, we would do it. Excess inflation funds are of no use to national security unless they are reinvested in defense by the Congress and the Department has no desire simply seeing them accrue. When savings due to lower inflation occur, we report them to the Congress. It is their determination as to how these funds will be used.

I would now like to address the specific aspects of how we estimate, measure, and account for defense inflation. I will review the background and procedures used by DoD to budget and account for inflation, and show that our practices are sound and consistent with the intent of the Congress.

Measuring Defense Inflation:

Inflation is an increase in the general level of prices in the economy. This does not mean that all prices are rising or that they are rising at the same rate. Some prices may be constant while others are falling. The most common causes of price changes that come to mind are changes in labor rates and material costs. However, price changes also result from changes in the overall economic conditions in the business community, availability of supplies, materials and labor, schedule delays, strikes and industrial capacity problems.

One cannot ignore the particular mix of economic conditions that affect each sector of the economy when trying to measure inflation. In fact, these conditions may even cause inflation in a sector to be very different than the general overall inflation of the economy. We have highlighted that before by observing that the nature of the defense marketplace will result in a different rate of inflation than that experienced in the nondefense sector of the economy (Chart 2). Certainly, the particular programs of the defense budget, especially weapon systems, experience inflation pressures different than that of the economy as a whole. Any procedure to budget for inflation to fund fully our defense program must recognize that fact. That is why we are opposed to legislation that would restrict the Department to the use of general nondefense-related price measures.

Measuring inflation means determining actual inflation, not projecting future inflation. This point is important in budgeting resources for defense. Prior to the introduction of the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) defense deflator, no adequate data existed to measure actual defense inflation. Therefore, even though many believed that defense inflation behaved differently than general inflation, the point could not be demonstrated. The sentiment was strong therefore, that a definitive measure had to be developed. As a point of interest, the primary congressional support for the development of the BEA defense deflator as a part of overall improvement to the official GNP statistics came from the Joint Economic Committee.

There have been a number of alternatives to the BEA defense deflator for measuring defense inflation. They are generally input price indexes (i.e., a weighted average of the prices of inputs, i.e., labor and materials, making up a particular item or items) based on proxy

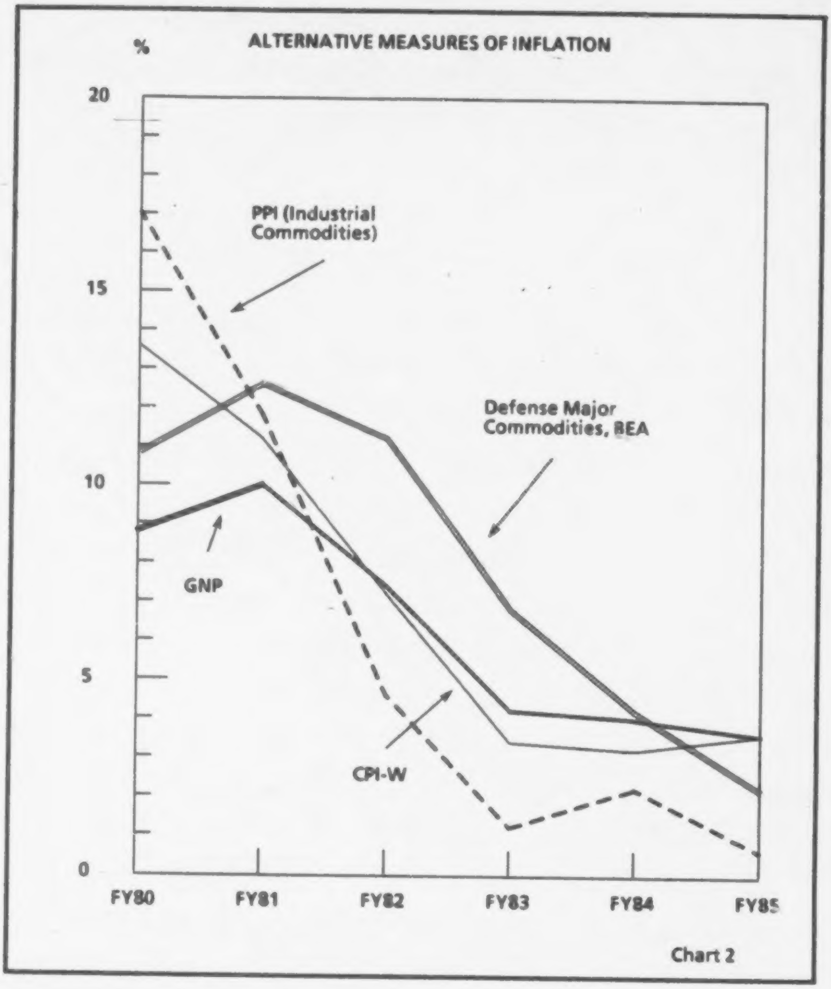


Chart 2

commodity prices such as the Producer Price Index (PPI) or Consumer Price Index (CPI). These alternatives are inadequate to measure defense inflation for a number of reasons.

The data bases for commodity indexes, based on a set of private sector indexes such as the PPI or the CPI, do not include prices actually paid by DoD for the purchase of defense-unique items. Appropriate proxies for actual prices in many defense-related industries such as aircraft, shipbuilding, and missiles and space equipment are extremely limited. As a result, the relationship of actual DoD inflation to projections of indexes based on private sector proxies is questionable.

Since its incorporation into the official GNP statistics, the BEA defense purchases deflator has been generally accepted as the best measure of historical defense inflation because it overcomes the weaknesses of the alternatives:

- It is conceptually and statistically consistent with the GNP deflator. Therefore, differences between inflation rates for the total GNP and for DoD are due to the fact that defense programs actually experience differing rates of inflation than does the general economy, not that there are differences in methods of calculation.
- It is based on the actual price history of DoD weapons purchases (DoD transaction prices).

- It is based on the actual market basket of weapons purchases. This is especially important in measuring defense inflation during the current defense buildup when the defense market basket changes in composition.

Inflation Assumptions in DoD budget proposals:

OMB develops overall economic assumptions as a framework for building the President's annual budget and the five-year Topline. These assumptions are then applied to our budget. Since the 1970s, several steps have been taken to improve how we budget for inflation. The Navy's shipbuilding program was the first program to budget for inflation. This was soon extended to include the other major procurement and RDT&E programs and eventually to the operating accounts (Chart 3).

Using projections of the GNP deflator to budget for inflation for DoD purchases other than major commodities and fuel has proven adequate. Actual data show that prices for these purchases have risen about the same as the GNP deflator. However, actual price data show that inflation for major commodities generally has been higher than that for the rest of the economy (Chart 4).

CHRONOLOGY of INFLATION POLICY in DoD

Mid-1960s	• DoD was permitted to budget for inflation in Navy shipbuilding..
April 1970	• House Armed Services Committee Report requests that DoD include "...realistic measure of inflationary trends..." in the long-range projection.
Dec 1970	• OMB grants exception to OMB Circular A-11 for major systems and major construction.
Oct 1975	• All procurement appropriations include inflation.
Oct 1976	• OMB allows inflation in the Operation and Maintenance appropriations.
June 1978	• Agency budget estimates include inflation based on rates provided by OMB.
Jan 1982	• DoD allowed to use inflation rates for major weapon systems higher than those projected for the general economy.

Chart 3

Therefore, In FY 1982, DoD received approval to use a rate higher than the GNP in budgeting for major weapon systems as an important component of improved acquisition management. For each of the defense budgets from FY 1983 to FY 1986, OMB permitted DoD to estimate inflation for the major procurement accounts on a 1.3 multiple of the GNP deflator. The GNP deflator has been used to adjust all other DoD purchases of goods and services, except fuel, which also received special allowance due to the volatile nature of its price change.

GNP and DEFENSE INFLATION*
(annual percent change)

	FY80	FY81	FY82	FY83	FY84	FY85
GNP	8.8	10.0	7.3	4.2	4.0	3.6
Defense Purchases						
Total	14.7	12.7	8.2	3.8	2.7	2.7
Fuel	80.5	25.3	-2.1	-9.4	-10.1	-4.3
Major Commodities	10.9	12.6	11.1	6.8	4.2	2.1
Other Purchases	10.6	10.8	8.5	4.0	2.8	3.3
Total less Fuel	10.7	11.5	9.3	5.0	3.3	2.9

* BEA Data

Chart 4

This system allowed us to provide additional inflation funding for major procurement items when needed. Under this approach, the estimated GNP rate is adjusted according to the relationship of actual defense inflation to the actual GNP rate. If DoD inflation for weapon systems shows a continuing trend of higher inflation, we adjust our rates accordingly. If it is approximately the same we do not use a differential. But in all cases we would do so in response to what was actually happening to defense inflation.

The success of this Administration in reducing inflation is now evident in the major weapons sector and has allowed us to budget for inflation in major weapons at the projected GNP rate in the FY 1987 budget. Currently, the defense budget reflects only fuel purchases priced at a unique rate.

Our system for including inflation funding in budget requests works quite well and we believe it should not be changed. We develop forecasts of defense inflation based on trends actually experienced. This procedure provides the flexibility to respond to changes in that trend.

Recent declines in the rate of inflation have resulted in proposals to budget for inflation like we did in the late 1960s, i.e., on an exception basis. This would be a major step backward. Certainly inflation has been significantly reduced during the past three years. But, there is no reason to believe that there will be a return to a sustained level of the 1 to 2 percent annual rates that we experienced from the early 1950s to the mid-1960s. Even though current inflation rates are low compared to the high rates of recent memory, we would not want to revert back to a method of budgeting for inflation that could increase the risk of substantially underfunding our programs if there were any increase in inflation.

We need to monitor actual DoD inflation in the preparation of future budgets to determine if prices for our programs begin to increase faster than those in the general economy. If so, we must make an adjustment to protect program. The Senate Armed Services Committee Report on the FY 1987 DoD Authorization Act noted this consideration by recognizing that major system prices have deviated from general price trends. Even though that is not the current condition, they believe that the principle of a major systems differential should be retained in the event that the recent decline in inflation should reverse in future years.

Accounting for Inflation Savings:

We have a system which identifies and accounts for inflation in the defense budget. Our ability to identify and report savings due to the much lower than anticipated rates of inflation during the last five years demonstrates this. The main point is that these savings do not directly accrue to DoD. In fact, they are savings to the Congress.

DoD records show that lower inflation after the budgets were submitted to the Congress provided $28.4 billion in savings for FY 1982 through FY 1985, and an additional $7.5 billion for FY 1986. These savings realized from lower inflation after enactment were: (1) applied to other defense requirements through congressionally approved reprogramming procedures; (2) used by the Congress to justify reductions to defense programs; or (3) lapsed and returned to the Treasury, as shown in the following table (Chart 5).

INFLATION SAVINGS in DOD -- FY 1982-86
($ in Billions)

	FY 1982-85	FY 1986	Total
Reprograming actions (Reapplied savings with approval of the Congress)	13.1	2.2	15.3
Lapses (BA returned to Treasury)	9.1	-	9.1
Congressional financing of FY 1985 Supplemental	-	0.8	0.8
Congressional cut for inflation fairness	-	1.1	1.1
Congressional cut for inflation premium	-	1.7	1.7
Estimated Congressional cuts for inflation	6.2	1.7	7.9
TOTAL	28.4	7.5	35.9

Chart 5

DoD reapplied $15.3 billion of savings from inflation and management improvements through congressionally approved reprograming procedures. These procedures were developed to provide a mechanism for DoD to respond to congressional direction as well as to accommodate unforeseen emergencies, priorities, and exigencies of program execution. Program requirements would have suffered extensively had not lower inflation given us resources for these reprogramings.

An additional $9.1 billion in budget authority lapsed and was returned to the Treasury.

Finally, the Congress itself often makes adjustments for inflation. It is difficult to measure their adjustments precisely, because such repricing involves both programatic and nonprogramatic reductions which are linked to other adjustments. However, we estimate that approximately $7.9 billion of the reductions to our requests made by the Congress over the last five years resulted from lower than projected inflation.

In their review of the FY 1986 budget, the Congress made further adjustments. They transferred inflation dividends of $0.8 billion from the procurement accounts to underwrite pay increases and additional operations and maintenance expenses in the FY 1985 Supplemental Appropriations Act; reduced the DoD FY 1986 procurement appropriations by $1.1 billion to account for the lower GNP deflator, and by $1.7 billion to account for the special commodity deflator.

DoD continues to review the budget for savings and reports them to the Congress under Section 1407 of the Defense Authorization Act of FY 1986. On May 29, 1986, the Secretary identified an additional $1.7 billion in savings as funding sources for higher priority program requirements. All these amounts were reapplied to program requirements.

Conclusion:

The full funding principle of budgeting was established in response to the desire by DoD and the Congress that the level of defense resources requested and approved be adequate to fulfill the requirements included in the request. Since the 1960s, DoD and OMB, with the urging of the Congress, have taken steps to ensure the funding integrity of defense programs by more adequately budgeting for inflation. Current low inflation and high federal deficits are not compelling reasons to return to a system which previously was considered inadequate.

The current procedures do not lead to windfalls for defense due to overfunding during periods of low inflation. As inflation has declined we have identified savings and either reapplied these funds or contributed to deficit reduction.

Including adequate funding in our budget requests based on realistic estimates of future inflation for our programs has proven to be sound policy. We should not change these procedures just when they have proven to allow the adjustments necessary to respond successfully to changing economic conditions. Underfunding defense requirements by ignoring actual defense price experience is not sound management or good budgeting.

After many years of experience without adequately budgeting for inflation, I believe that the current system best serves the requirements of the Congress and the needs of DoD.

Senator **Proxmire**. Mr. Helm, you're aware that Comptroller General Bowsher disagrees with your figures on excess defense inflation and with your account of what happened with the excess inflation funds.

How do you respond to his conclusion that you're understating the amount of the excess by more than $8 billion and, that your accounting system does not make it possible to tell where all the money went?

Mr. **Helm**. Well, in looking at his figures, Mr. Vice Chairman, it seems to me the major difference between the $36 billion that we identified in total and the $44 billion that GAO identified is due to the fact that they do not accept the validity of the special inflation concept or that more money was required for major procurement inflation than for other types of purchases. And they have identified the total amount that was contained in those years' budgets for the special commodity deflator as a dividend.

We do not agree that that money was a dividend. We feel that the economic indicators, the BEA and whatnot, indicated that until 1985 major procurement inflation was running above the GNP deflator. And that's the major essence of the difference right there.

Senator **Proxmire**. I'm going to ask Mr. Kaufman to follow up.

Mr. **Kaufman**. The problem that the Vice Chairman is getting at, Mr. Helm, is that GAO can't seem to determine through an examination of your financial records how you arrive at your figures both with respect to the total amount of the excess inflation appropriations and with respect to the disposition of those funds.

The Comptroller General has testified that they simply cannot track how you account for the money and how you dispose of it.

Mr. **Helm**. Well, we determine the amount from a top down approach. A certain sum of money is appropriated for the Department of Defense and there is a certain defense inflation assumption contained in the amounts that are appropriated for programs. If actual inflation is lower than that estimate, obviously a net figure is excess to the purposes it was appropriated for.

As far as the accounting issue is concerned, first of all, Mr. Vice Chairman, Congress doesn't appropriate inflation per se. It appropriates funds for weapons systems. We have an adequate system for accounting for the obligation of funds appropriated for defense programs.

We do not have a need to break inflation funds out separately in our accounting for every program and system and carry a separate line. Neither OMB nor GAO at the moment require accounting systems to do this. I know of no government accounting system that does. As a matter of fact, I don't know of an accounting system in existence anywhere that attempts to track inflation as a discrete item.

The point is, we do not have to do this to know that we have a resource if inflation drops. Every program in the defense budget is priced using the administration's economic assumptions. If actual data indicate that GNP inflation is lower than projected, the level projected in the budget resulting can be determined and the adjustments can be dealt with accordingly.

So I don't think it's an accounting issue in focusing on it and this is the point. The issue is the accuracy of defense inflation forecasting. Accounting systems can only reflect entries that are made into them. If a misestimate is made of inflation, then a wrong number is going to be entered into an accounting system and the key is to try to get estimates of inflation that are as accurate as possible. It's a difficult thing to do, given the science of economic forecasting, and our only goal, as I've said, is to ensure that programs are fully covered whatever the inflation turns out to be.

Senator **Proxmire**. Mr. Helm, you may have heard Richard Ziemer's testimony that it's inappropriate and wrong to use the defense deflator in your forecast for defense inflation. How do you respond to that?

Mr. **Helm**. Well, Mr. Vice Chairman, if I could, I'd like to ask Mr. Beach to respond to that. It's a somewhat technical issue.

Mr. **Beach**. Mr. Vice Chairman, it might be important just for a minute to understand how we report inflation and where we get the data from and I'll be very brief.

If we're talking about actual data—that is, some period in time which we have data and it's complete—it comes from the Department of Commerce and it comes as a part of what Mr. Ziemer mentioned as the gross national product national income accounts.

To that extent, whatever we report in a past budget for defense is based on the gross national produce price deflator or the major weapons system deflator that also comes from the Bureau of Economic Analysis.

When this work was first started in the middle 1970's and up until now, we have used the Department of Commerce data knowing that that was the best data available. I don't think that we have any other data that we would use that is more relevant or more meaningful than what we get from the Department of Commerce.

If the experts in the Department of Commerce decide or through testimony before your subcommittee and others that there's some better measure, then that could certainly be considered. But from our standpoint, the data that we receive from the Commerce Department and what we've used to report inflation in the defense budget is simply the best data that we can use and it is data that is reported through part of the national income accounts.

Senator **Proxmire**. I'd like to have Mr. Kaufman follow up on that. Go ahead, Dick.

Mr. **Kaufman**. Mr. Beach, you're aware of the timing problem inherent in the defense deflator and the fact that it lags behind the inflation trend in the rest of the economy.

Knowing that and know that the people who produce the defense deflator in the Bureau of Economic Analysis have suggested that it's inappropriate to use it as a forecast or in your forecast because of the timing problem, why would it not have been possible or why is it not possible now to make some adjustment in the defense deflatory information to take account of the timing problem and the lags involved?

Mr. **Beach**. Well, if there is a timing problem as described in Mr. Ziemer's testimony between the time the moneys are appropriated and the time the weapons system or the goods or services are delivered, and if they can report better data we will certainly use it. But as I mentioned a moment ago, we are obliged to use the actual data that's reported by the Department of Commerce.

I don't think we're in a position where we can say, "This is wrong and we will not use Department of Commerce data." That is a judgment that the Bureau of Economic Analysis must make.

Senator PROXMIRE. Isn't it correct, Mr. Beach, that Mr. Ziemer and others in the Bureau of Economic Analysis advised your office not to use the defense deflator in forecasting or measuring past inflation?

Mr. BEACH. I have never received an advisement from either the Department of Commerce or OMB or any other source indicating that we should not use the historical data that we currently use.

Senator PROXMIRE. Well, will you see if you cand find such an advisory? Because it was stated by Mr. Ziemer that you were advised not to use the defense deflator.

Mr. BEACH. I would be very glad, Mr. Vice Chairman, to check into it and to consult with people in the Department of Commerce and in the Office of Management and Budget.

Senator PROXMIRE. Do you deny that nobody in your office consulted with Mr. Ziemer about this or discussed it with him?

Mr. BEACH. I'm not quite sure what it is that your question is in terms of what I'm supposed to deny, but I talked with Mr. Ziemer when these studies were conducted in the late 1970's and it was my understanding then and now that the data we were receiving from the Department of Commerce could be used for the purposes for which we've used it. If it's published in the Survey of Current Business, which is a monthly publication of the Department of Commerce, then I think we can use it.

Senator PROXMIRE. Mr. Ziemer, will you come forward again for just a minute? I saw you nodding your head and perhaps agreeing with Mr. Beach and we want to get the record as straight as possible. Go right ahead and respond to did you or did you not advise—did you or your office advise the Defense Department not to use the defense deflator in forecasting and measuring past inflation?

Mr. ZIEMER. We have discussed with members of the staff in the comptroller's office—the timing problem with regard to defense outlays.

Senator PROXMIRE. You discussed it with them. Well, that wasn't as I understood you to say—did you or did you not advise them not to use the defense deflator in forecasting and measuring past inflation?

Mr. ZIEMER. We have told them that you cannot forecast very well off of the deflator because of the timing problem.

Senator PROXMIRE. OK. Thank you, sir.

Now, Mr. Beach, was that your understanding?

Mr. BEACH. I understand a little bit more clearly right now from that line of questioning what his answer is and let me just clearify it if I might just a moment, Mr. Vice Chairman.

Up until now when I first answered your first question I talked about actual data, historical data, and I think the record is now clear that the information that we receive from the Department of Commerce and is published in their documents is what we use to reflect historical inflation in the defense budget. Each year we publish those data and confirm them in our "National Defense Budget Estimates" book which is provided to the Congress.

Now, new subject: Forecasting inflation. We don't try to forecast inflation off of the Department of Commerce series. The primary reason is that each administration, and rightfully so, provides to us all economic assumptions that we will use in our budget. So that we are consistent with the general economic assumptions that are printed in the front of the President's budget each year.

Our budgets are forcasted using the administration's assumptions for the gross national product. The exceptions in recent years have been two: One, fuel. Fuel prices have been provided to us by the Office of Managment and Budget. Two, the major weapons systems factor which has been discussed today was authorized for a period of 4 years during the early 1980's. That was recognized by OMB and it was put in the budget in a very explicit form.

Therefore, I would answer by saying, Mr. Vice Chairman, that we don't forecast off of Department of Commerce data because we can't. We are obliged, and reasonably so, to follow the administration's forecast for economic assumptions.

Senator PROXMIRE. Mr. Kaufman has a followup on how the kicker comes into all this.

Mr. KAUFMAN. Is it not correct that the multiplier known as the 30 percent kicker which was added to the OMB estimate of inflation for Defense Department weapons purchases was derived from some sort of average inflation rate shown in defense major commodity prices broken out from the Bureau of Economic Analysis defense deflator?

Mr. BEACH. Yes. The Congressional Budget 'Office, Data Resources Inc. (DRI), which Mr. Helm mentioned also, repoted in the early 1980's that using Commerce data as we did at the time also ourselves recognized that the rate of inflation reported by the Department of Commerce for those major weapons systems exceeded the GNP.

Yes, you are correct. That's where the source came for using a factor. But again, we are not using the Department of Commerce data series as a projection. To make projections we are required to use OMB's assumptions.

The Department of Commerce does not make assumptions about economic forecasting, I believe.

Mr. KAUFMAN. You have correctly separated the problem of forecasting inflation with measuring past inflation.

Mr. BEACH. Yes, I think that's important for all of us to understand because we need to report data from sources that are recognized in the studies and the research that was done in the late 1970's and early 1980's on this subject. I think Commerce has made a major contribution.

Forecasting, or course, is a separate subject, as you are aware.

Mr. KAUFMAN. Isn't it also correct, however, that it is equally inappropriate to use the defense deflator to measure the effect of inflation on defense outlays because of the timing problem that we have discussed?

Mr. BEACH. Problems like this have existed in many prices indexes, although I'm not expert on all of this. I have formal training in economics. There have been timing problems in many index series of data.

Now in our particular case—that is, the Department of Defense—the question is, because it takes 3 years, 4 years, perhaps 5 years to obligate and expend moneys and then have a weapons system finally delivered, we will have that problem. But I think also once we recognize that our particular acquisition take place over time, over long periods of time, we still are trying to seek the most reasonable means of reflecting inflation given that degree of uncertainty.

But to say that our past practices are that there was an inflation dividend based on timing problems I think jumps from one subject to another one.

Senator PROXMIRE. Mr. Helm, this year for the first time since fiscal 1982 you're not using a special multiplier in your forecast. The special multiplier has accounted for one-third of the excess inflation funds in the last 5 years. That means that the inflation funds may be reduced by only one-third for fiscal 1987.

If GAO's figures are correct, you could have another huge dividend this year amounting to as high as $6 billion. How do you respond to that?

Mr. HELM. Well, Mr. Vice Chairman, if actual inflation drops below the estimate that was used that is implicit in whatever funds Congress appropriates for the Department for fiscal year 1987, certain sums will not be required for the purposes they were appropriated. If inflation goes lower than the estimate that was used in the budget, amounts will be in excess.

Senator PROXMIRE. Let me ask you, what was your estimate of the inflation for 1987 in your budget?

Mr. BEACH. Mr. Vice Chairman, if I could answer your question by giving data from this book I mentioned a moment ago, for fiscal 1987 we have forecasted in the purchases area—now we're not talking about military and civilian pay. If we may, can we set those aside? I'll read those assumptions. Let me read all the assumptions.

Senator PROXMIRE. Go ahead.

Mr. BEACH. Fiscal 1987 military pay raise assumptions, 4 percent; civilian pay raise, 3 percent; major weapons systems, 4.1 percent; fuel, minus 4.3 percent; all other purchases, meaning gross national product, 4.1 percent. Composite for the entire defense budget, 3.6 percent.

Mr. HELM. 4.1 percent was the GNP deflator that was used for general purchases as well as major purchases.

Senator PROXMIRE. For 1987?

Mr. HELM. For 1987. There were no additional increments used for major purchases, the same as GNP.

Senator PROXMIRE. The inflation rate is running below that now, is it not, substantially? Certainly we're talking about so many things here. The Consumer ~~Price~~ Index are all well below 4.1 percent certainly.

Mr. HELM. Fiscal year 1986 inflation is far lower than was forecast and private forecasters are predicting lower than 4.1 percent for fiscal year 1987.

Senator PROXMIRE. What you're doing is forecasting a sharp rise in inflation in your budget which would give you, of course, a larger or perhaps another big dividend, conceivably a $6 billion dividend even without the kicker.

Mr. **Helm**. I don't know. The amount will depend on the final data, Mr. Vice Chairman. The point to emphasize, though, is that the implication always seems to go back to the fact that DOD is deliberately using a factor that's higher and locking up more money in inflation on purpose.

Senator **Proxmire**. That's what's happened.

Mr. **Helm**. Well, if it's happening, it's purely a function of the art of economic analysis and the ability to forecast. As I said before, we have zero interest in putting more funds into inflation than we think are required to cover the full cost.

Senator **Proxmire**. Well, that's hard to believe. Of course, I don't want to go all over this again, but you have been able to increase the amount of appropriations available to the Defense Department through reprogramming because you have overestimated the inflation rate consistently every year since this administration has been in office, since you've had the position you occupy.

Mr. **Helm**. Well, if money is freed up, it's due to an error in the economic forecasting. If we, in fact—

Senator **Proxmire**. The error has always been running in the same direction. It's always giving you more money and I don't say that that's necessarily something that you scheme about, but you always seem to come up with forecasts which are very beneficial to the interest that the President has and that the Secretary of Defense has and you perhaps share that you ought to have more than Congress is giving you. We're making some big cuts and it may be unwise on our part. We make the cuts and then you come right back with an inflation estimate that enables you to make up substantially for some of those cuts.

Mr. **Helm**. Mr. Vice Chairman, if an absolutely accurate estimate existed for what inflation would be that we were sure would not lead to underfunding the programs, as was the case in the late 1970's when inflation was running higher, we would obviously like to use the most accurate estimate and get a top line from the President to program defense programs for. We like to fill that up as much as possible with real programs, not with amounts for inflation.

It would be illogical for us to hold down our ability to program for real weapons systems, real contributions, and instead to put it in inflation. That just would not make sense. We would never consciously do that. There's no point in it for us.

Senator **Proxmire**. Of course there's a point in it. The point is that you cant's sell your programs to the Congress and we make cuts and you overcome those cuts by coming in with an overestimate of inflation and the overestimate of inflation enables you then to reprogram with sweethearts and pretty much at least get a substantial amount of what your want.

Mr. **Helm**. Well, no, Mr. Vice Chairman, I wouldn't characterize the oversight committees as sweethearts, and we have to go through that gauntlet and the funds are not available unless we successfully get through it. And I don't know what else I could say.

Senator **Proxmire**. Now would you agree that if the Commerce Department published a second defense deflator based on defense outlay prices it would be a better measure of the effects of inflation on defense outlays than the present defense deflator?

Mr. **Helm**. I'll defer to Mr. Beach on that technical issue.

Mr. **Beach**. Once we had a chance to see how this alternative was going to be constructed and the work that was going into it, I would think we would go through the same procedure that we did in the 1970's. That is, have a good look at it and have some experts outside of government look at it, as they did originally.

Senator **Proxmire**. But you're familiar with this, aren't you? You were involved in the——

Mr. **Beach**. I was involved in the one that's currently in place, yes.

Senator **Proxmire**. Well, it was originally contemplated to do an outlays deflator, and you did one, and then it was reduced because of the budget situation, but it was a very, very, very small amount. I think it's been testified here at 2 man-years of work. It was millions or billions of dollars.

Mr. **Beach**. It could be. Whatever the series was that came from the Department of Commerce we used it, and at the time that I was looking at the data in the late 1970's I had the understanding that the series that we were using was appropriate. If time proves that there's a better series and that is agreed to by the experts in the field, I don't believe that we would be opposed to considering it.

Senator **Proxmire**. Well, wouldn't an outlays deflator be a better device to use because there's no lag problem or less of a lag problem?

Mr. **Beach**. Well, Mr. Vice Chairman, yes, it depends on what you want to measure. If you want to measure outlays and that's the goal in most economic analysis, then it would probably be better for that purpose.

Senator **Proxmire**. Isn't that precisely what we want to measure?

Mr. **Beach**. Well, as you know, our budget involves other things. It involved appropriations, budget authority, unobligated balances, and total obligational authority.

Senator **Proxmire**. The only thing we want to know is the effect of inflation on outlays.

Mr. **Beach**. Right. And the data that has been quoted today, the $44 billion and the $35 billion and so on, are budget authority because they represent appropriations that the Congress appropriated to the Department of Defense.

Senator **Proxmire**. And the reason for that is because we don't have outlay data.

Mr. **Beach**. Well, we use the best data available. If better data can be made available, we certainly won't object once its's been carefully reviewed.

Senator **Proxmire**. Well, that's fine. Let me just conclude by asking you, Mr. Helm, I've circulated a draft of a legislative proposal to deal with the defense inflation problem and I'd like you to review it and provide us with detailed comments.

Mr. **Helm**. I'd be happy to do that, Mr. Vice Chairman.

Senator **Proxmire**. I have a closing statement here. Obviously, Congress is faced with a serious problem in the area of defense inflation.

Looking at the big picture. Congress is being induced to overappropriated for defense. Year after year we have appropriated for defense. Year after year we have appropriated billions more than was necessary to cover inflation.

In addition to appropriating too much in the first place, the testimony and GAO's reports show Congress has lost effective control over huge amounts of money, much of which comes from the excess inflation funds.

GAO points to the Pentagon's weak financial management system and says it is badly in need of reform.

The Pentagon accuses its critics of misstatements of facts and misrepresentations.

My own view is that it is ridiculous and counter-productive to deny that there is a huge, multibillion dollar problem with respect to defense inflation.

What we have here is something like a tax loophole which allows a few people to escape tax burdens which the rest of society must carry.

Here we have an appropriation loophole that has enabled the Pentagon to get away with with $7 to $9 billion a year.

The loose, permissive reprogramming procedures simply underline the problem. They put a fig leaf over the embarrassing appropriations loophole.

The fact is that the Pentagon has been misusing the defense deflator in making its forecasts and in measuring past inflation.

I want to thank you very, very much, Mr. Helm and Mr. Beach. I want to thank you also, Mr. Ziemer, from the Commerce Department, and the other witnesses.

The hearing will stand adjourned.

[Whereupon, at 11:55 a.m., the subcommittee adjourned, subject to the call of the Chair.]

DEFENSE ECONOMICS ISSUES

MONDAY, OCTOBER 26, 1987

Congress of the United States, Subcommittee on National Security Economics of the Joint Economic Committee,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room SD-538, Dirksen Senate Office Building, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senator Proxmire.

Also present: Richard F Kaufman, general counsel.

OPENING STATEMENT OF SENATOR PROXMIRE, CHAIRMAN

Senator **Proxmire**. The subcommittee will come to order.

The Subcommittee on National Security Economics began inquiring into the Air Force F-16 fighter aircraft program earlier this year. Initially, our interest concerned the Government programs to improve manufacturing technology at the Fort Worth, TX, facility where the F-16's are manufactured. This facility is owned by the Air Force but operated by General Dynamics, the prime contractor for the F-16.

Under one program, the Air Force has spent $173.4 million to modernize General Dynamics' manufacturing technology for the F-16. We want to better understand the effects of this industrial modernization program on quality and costs of production. Has Air Force financial assistance to General Dynamics improved the quality and reduced the costs of the F-16? Is it worthwhile for the taxpayers' perspective?

In the course of our inquiry, we learned about the April 1987 decision in the Federal District Court in Tampa, FL, finding General Dynamics guilty of negligence in the design and manufacture of the F-16 and awarding $3.1 million to the widow of Capt. Ted Harduvel, who was killed in the crash of the F-16 in 1982. The case involved allegations of electrical malfunctions in Captain Harduvel's aircraft.

The finding in this court case and the evidence introduced at the trial raise the most serious questions about the F-16 program.

First, there have been at least 75 F-16 aircraft destroyed and 28 persons killed in F-16 accidents since 1979. At an average cost of $17.4 million per plane, the accidents have cost the taxpayer $1.3 billion. Of course, the value of the lives lost cannot be calculated. How many of these accidents were caused by electrical problems and other design and manufacturing defects such as those identified in the Tampa trial?

Second, did General Dynamics deliver aircraft to the Air Force knowing they were defective?

Third, did General Dynamics conceal the electrical problems from the Air Force?

Fourth, the Air Force has an extensive program to administer the F-16 contract and to manage production of the aircraft. The Air Force plant representative at the Fort Worth facility has a staff of 250 people, 85 of whom are assigned to quality control. An additional 400 Air Force employees work for the F-16 system program officer, the SPO. What is the role of these government employees in the inspection and testing of the F-16 and in the management of the program? Has there been a lack of adequate management controls, and did that contribute to any of the F-16 accidents?

Fifth, should the Air Force have known that design and manufacturing defects concerning the electrical system could have caused the F-16's to crash?

Sixth, the Air Force investigates each crash of an aircraft. Why are the findings as to the causes in the Air Force accident reports classified? How many crashes were due to electrical malfunctions?

Seventh, were the Air Force accident investigations properly conducted?

Finally, has there been a coverup of the F-16 electrical problems?

Our witnesses include Mrs. Janet L. Harduvel, who brought the lawsuit against General Dynamics and two of the attorneys who represented her, Howard Acosta and Charles Price. Mr. Acosta is a former Navy fighter aircraft pilot. Mr. Price was the lead trial counsel in the case. Mrs. Harduvel and her attorneys will appear first as a panel.

They will be followed by Lt. Gen. George Monahan, Jr., and Mr. A. Ernest Fitzgerald. General Monahan is the Military Deputy for Acquisition in the Office of the Assistant Secretary of the Air Force. He is the top Air Force official in the area of procurement. Mr. Fitzgerald is the Management Systems Deputy in the Office of the Comptroller of the Air Force. He is responsible for devising and putting into effect good management controls for the purchase of weapons. At my request, Mr. Fitzgerald accompanied the subcommittee staff during a visit to the Fort Worth facility on September 23 of this year.

We also invited General Dynamics to the hearing to give them the opportunity to give their side of the story. General Dynamics has refused to appear this morning. General Dynamics explained their refusal to testify on the grounds that the lawsuit with Mrs. Harduvel is still pending. The company believes the courts are the appropriate forum to discuss the Harduvel crash. General Dynamics used the same argument in refusing to discuss the same problem of electrical malfunctions with the subcommittee staff. It refuses to provide information or turn over documents to the subcommittee on the same grounds.

I strongly disagree with this argument. If General Dynamics is correct, a defense contractor can legitimately refuse to provide information about a defense contract to a congressional committee whenever a lawsuit concerning the program under contract has been filed. That cannot be. It would undermine and defeat the ability of the Congress to probe defense contracts to see whether the taxpayers' money is properly spent, and of course it would delay it not for months but for years and make it very, very difficult—impossible—for the Congress to act in a timely way.

The F-16 program will cost an estimated $47.5 billion. Congress has a right and a duty to investigate all aspects of this program. General Dynamics has an obligation to be responsive to Congress and to be accountable.

Located next to the place set aside for General Dynamics are three posters that General Dynamics has on the walls of the Fort Worth plant. The posters provide information about hotlines for employees to use for various purposes. One is a fraud, waste, and security violation hotline. Another is an ethics hotline. A third is a fairness, dignity, and respect hotline. Presumably, company employees with complaints in any of these categories can use the hotlines to get some attention at the corporate management level.

I am sure they serve useful purposes. I would only suggest a fourth poster for a corporate public accountability hotline. A sense of accountability to the taxpayer seems to be absent at this firm. Perhaps if there were a public accountability hotline, Congress might be able to get answers to questions about the F-16 program.

Now, Mrs. Harduvel, Mr. Price, Mr. Acosta, would you come forward. Mrs. Harduvel, would you sit over here. Mr. Acosta and Mr. Price.

I would like each of the witnesses to spend 10 minutes in summarizing their prepared statements in order to leave enough time for questions and answers. All of you have excellent statements. I have had a chance to study them, and the staff has too. I know it's difficult when you feel so strongly about this, there is so much information to provide, to confine your remarks to 10 minutes. But I hope you would do that because I see you have, Mrs. Harduvel, all kinds of documentation.

Mrs. Harduvel. Some people bring documents out. I have brought them in.

Senator Proxmire. I want to congratulate you on your appearance on "60 Minutes" last night. It was very impressive. Will you introduce your daughter, sitting right behind you?

Mrs. Harduvel. This is my daughter, Christina Julia Harduvel. I brought her with me. I thought it was an excellent thing for her to see our government in action. She is studying the Constitution in school, and I wanted her to see it in action and know that it does work, that it is not just something you read about in books.

Senator Proxmire. Well, very good. She is a fine-looking young lady, and with parents such as she has—

Mrs. Harduvel. She looks like her dad.

Senator Proxmire. Mrs. Harduvel, go right ahead.

STATEMENT OF JANET SCIALES HARDUVEL

Mrs. Harduvel. My name is Janet Harduvel. I am very, very honored to be here today. I am a 36-year-old widow of a fighter pilot who died on the 15th of November 1982, when his aircraft impacted the side of a mountain. I am here as a woman, a U.S. citizen, and a taxpayer who is horrified by what I have uncovered in the past 5 years of investigating what actually happened to my husband on November 15, 1982, at 2 minutes after 9 on a Monday morning.

He was the best of the best. He was a fighter pilot's fighter pilot. It wasn't just my opinion, it was the military's opinion. He was a major selectee, graduated first in his class. He attended the prestigious Fighter Weapons School in Las Vegas. He had graduated with a dual college degree in math and physics, with honors in both. He was handpicked by a two-star general for the F-16, and as soon as he got to the Air Force base, he was a top gun, not only at the Air Force base but 3 days after he was missing, before he was declared dead, I had received a clipping that he had just won the prestigious Top Gun Award at MacDill, which he had won at Pusan in Korea as well.

He died at the bottom of a crater formed when his aircraft impacted at 600 miles an hour. The cause of death was pilot error, as it normally is when there is a pilot around. You say, "This is what happens. This is the case."

I couldn't believe it, so I began to ask questions. I found out it is very difficult to get information in a military accident. They just don't release it. But I was not the only person who was very surprised at my husband's death in an F-16 and at the manner of it.

One instrument pointed out that he was 40 degrees nose high, and the other instrument said 60 degrees nose low. Neither one accurately reflected the aircraft position of 86 degrees nose down. He impacted at a very, very steep attitude.

My husband had some last words. It was, "Knock if off, knock it off, I've got a problem." Unfortunately, he never said what the problem was. He told the No. 1 airplane to rejoin on him and told the No. 3 to go on range. He put the airplane at 5 degrees nose down, a 60-degree angle. He went into a puffy cloud. He exited the other side and was never seen again.

Five days and nights later, they found him in the wreckage of the airplane. The Air Force said, "Pilot error." My husband always told me I was a fighter pilot's wife. I was very proud of what my husband did, and I believed very strongly in what he did and I was in a support function.

He always told me, "Jan, if I crash my F-16, don't cry for me, because I died doing exactly what I wanted to do. But get yourself a copy of the safety report and the best attorneys in town and start writing and go ahead and find out what happened and press the suit, because it's not going to be my fault."

Well, I found out what the problem was. That's why I am here. You need to know what I have learned about General Dynamics, and its highly touted premier fighter, the F-16, the airplane that is touted as the best single-engine fighter in the world.

Well, the truth is that F-16 was defective. It was defectively designed. It was defectively manufactured. And what's worse, General Dynamics knew it was defective, and it didn't tell the Air Force and it didn't tell my husband. They had complete design latitude with that jet as well as a duty to warn the Air Force of the problems. Yet, they chose not to.

To really understand what happened to Ted, you have to understand what was going on at the factory in the spring of 1982. There had been a team sent out to inspect all bases in the world that have F-16's. What they concluded was that there was a problem with chafing. They began to assess the problem and initiate a fix. They knew the problem. Unfortunately, the Air Force didn't find out until much later.

My husband's airplane, aircraft no. 0692, came off the assembly line in June or July, in time to be accepted by the Air Force on August 25, 1982. Seven days later they issued a time-compliance technical order, something like this, and there are a bunch of them here. There were over 100 of them issued just for the electrical problem on the airplane alone. I have no idea what happened with other systems. Just the electrical problems we found this. They issued it 7 days after my husband's airplane was picked up.

It said, "Inspect the aircraft, one-time inspection at the 100-hour phase inspection." Unfortunately, Ted's aircraft crashed at 75 hours and never made it to that inspection. It said to check for loose or oversized screws, wire chafing, and problems of that nature that would control the quality of electricity to the instruments.

They never walked over across the factory to the other department to see if they had screws that were too long. And do you want to know why? Was it for pilot safety? No. Guess what? They get to cash the check for $14 million when the Air Force accepts the airplane, not before, but when the Air Force signs on the dotted line and says, "Yep, we'll take this jet." That's when they get to cash their check.

The Air Force relies on General Dynamics' judgment on this, to say, "Yes, this jet is ready, no problem." There were waivers on my husband's aircraft. There was an inspection that needed to be done, and they didn't do it. What they said was, "Go ahead and take it now. Come on, we can fix it at the 100-hour mark, no problem." They relied on the contractor's superior knowledge and resources, and they, I believe, in good faith accepted a defective jet that 80 days later killed my husband.

General Dynamics knew there were problems with the electrical wiring in the F-16. They even made a videotape about it. They started making it in March 1982. Unfortunately, the Air Force didn't get it until August 1983. But there was a real big issue at stake, not so much how we're going to fix this airplane but who is going to pay for it. Certainly not General Dynamics. They don't want to pay to fix their design defects because it's much more profitable to pass those costs along to you and me, the taxpayers. My attorneys will talk more about that.

But basically they can fix an airplane one of two ways. They can issue a notice of defect which says there is a problem, stop and let's fix it right away, or they can go ahead and issue what is called a time-compliance technical order. That is what these are. There are over 100 on the F-16 alone. What they say is this is a product improvement, because product improvements, the Air Force pays for. To fix a defect, General Dynamics does it.

I have in front of me a bunch of computer runs. These were compiled by the special projects officer. They list incident after incident of electrical wire harness chafing problems. There is usually one quote at the bottom, and it says, "This is an isolated incident. It's the first of its kind. Let's wait and see." In the meantime, guys are flying and dying.

My husband was only the fourth who got killed in the F-16. There are now 27 dead F-16 pilots, over 70 attrited aircraft. Did all of them get stupid? Did all of them forget to look at the instruments? My husband had over 2,600 hours in a fighter aircraft. That is about 2,500 separate flights because they only log about an hour or eight-tenths of an hour per flight. He had more time in the F-16 at the time than many test pilots did. Yet, they said that he forgot to look at his instruments.

You asked about the role of the Air Force and General Dynamics after the accident. The Air Force as an entity was very difficult to get information from. They said that the information uncovered during an accident investigation is privileged information. They don't want to release it to you because otherwise nobody is going to cooperate to get to the bottom of the problem.

The contractor says, "You own the airplane. It's yours. Try to figure out what happened. We have the facilities to assist you with bench testing." The Air Force guarantees them that it will not release that information no matter. What I said, no matter what I did, I could not get the findings, the conclusions, or the recommendations of the Air Force board on my husband's accident—at least not legitimately.

But fortunately, somebody decided that he thought that there was something more to what happened to Ted. I received a copy of the message traffic of the safety board report that highlighted two instruments, one pointing the nose up, the other the nose pointing down.

That is when I brought it to my attorneys and we started from there. I can understand the need to get truthful, honest information because I really agree that we should prevent accidents at all costs. Unfortunately, in our case it only serves to obscure the truth and cover up the problem. It was an electrical problem in that jet.

Unofficially, though, the Air Force was great to me. Every guy I walked up to from E-1 to four-star general, if I looked them in the eye and said, "I need your help. What happened to Ted? Will you help me," every last one of them said, "You've got it," even if it meant that they put their own careers on the line. They wanted to know to a man as much as I did what happened to my husband so as to prevent things like that happening to other guys. One guy looked at me in the eye and said, "It killed Ted. If it could kill Ted, Janet, it could kill me." They wanted to know what was wrong. They wanted to fix it.

The Air Force really cares about the pilots that die in those airplanes, and I am going to tell you they cared about this wife too because we never would have gotten as far as we did without their cooperation.

As a matter of fact, after the verdict, armed with the information we uncovered at the trial, I made an official request of Robert Springer, who is the Air Force inspector general, and requested that he reconvene the mishap board and examine the evidence that came to light.

After the accident investigation board closed, on August 13 I received a letter from General Jack Gregor, commander-in-chief of Pacific Air Command, where the accident occurred. He informed me that they had officially reopened the board, reconvened it, and I got a kick out of 127-4 telling me that they weren't going to release the findings.

The board concluded on the 5th of October. I don't know what the conclusion is becuase, again, that is privileged.

General Dynamics was not nearly as nice to us as the Air Force was. Their conduct was one of obscuring information from the very beginning. We requested quite specific information regarding the electrical system, wiring diagrams, product activities, and support digests. Up until 2 days before the trial, they refused to produce those documents.

They actually showed up at the pretrial conference on Friday, and the Federal magistrate finally said, "That's it, I've had it, start producing these documents tomorrow morning at the factory at 9:30 in the morning." The world's greatest accident investigator jumped on a jet, and we were there. We left at 4 in the morning to be there and review documents. We picked our electrical expert up along the way.

Senator **Proxmire**. Mrs. Harduvel, your 10 minutes is up. Can you conclude in about a minute?

Mrs. **Harduvel**. General Dynamics has stonewalled to this day. Of all the documents I have brought you, you won't see any with General Dynamics' name on them.

Ted would have been 40 years old on Wednesday. Please don't let him die in vain. Fix this aircraft. Fine them, and teach them that the consequence of this action is they will be held liable for their products. When you are held accountable for a product, you make sure it works properly. That is what I am asking you to do: Fix the airplane. These are less guys that the Russians have to kill. Please.

[The prepared statement of Mrs. Harduvel follows:]

PREPARED STATEMENT OF JANET SCIALES HARDUVEL

My name is Janet Sciales Harduvel, and I am deeply honored to be here today. I am a 36 year old widow of an Air Force fighter pilot who was killed almost five years ago in a crash of his F-16. I come to you today not as an attorney nor electrical engineer, rather, I appear as I am: a woman, United States citizen, and a taxpayer horrified over what I have uncovered in the past five years of investigating what actually happened to my husband on November 15, 1982, at 9:02 a.m. on a Monday morning.

He was the best of the best, a fighter pilot's fighter pilot. He was tall, dark, handsome, and smart; he graduated first in his class in F-16s, attended the prestigious Fighter Weapons School, was voted outstanding IP and junior officer of the quarter, had a dual college degree with honors in Math and Physics, and he was hand picked (by a man who is now a two star general) for the F-16s and flew them as soon as the airplane arrived at MacDill in May, 1980. Two years later he died in that jet at the bottom of a nine foot crater, the impact a jet roaring at 600 miles per hour makes in a granite mountain. A man with over 686 hours in the F-16 alone (more than tests pilots had at that time), over 2500 fighter hours overall, a man who had won the prestigious Top Gun award at MacDill and had just won the identical award three days earlier at Korea; and the official cause of death is "Pilot Error".

I couldn't believe it, so I began to ask qestions. I found out that one instrument pointed 40 degrees nose high and the other pointed 65 degrees nose down but neither one accurately reflected the aircraft position of 86 degrees nose down; virtually straight down in afterburner mid-way down the slope of a granite mountain. My husband had some last words, "Knock it off, knock it off, Lead has a problem". He told the number one plane to rejoin on him and directed the number three to continue the mission. He put the plane into a 60 degree bank, nose slightly down, and began to return to the base seven minutes away. He was last seen in a puffy cloud; he was observed exiting it, and, a moment later, enter the cloud deck below and vanished. One hundred and eight hours later, five days and nights, they found the wreakage and my husband's remains. After 30 days of investigation, the Air Force concluded the only thing possible...Pilot Error. My husband had always told me, "Jan, if I crash my F-16, don't cry for me because I died doing what I wanted to do; but get yourself a copy of the safety report and the best attorney in town because it ain't going to be my fault". Well, I did exactly that, gentlemen, and I foud out what "the problem" was and that is why I am here to talk to you today. You need to know what I learned about General Dynamics and it's highly touted premier fighter the F-16 (Fighting Falcon), the airplane with the safest single engine jet history or so says their advertising.

Well, the truth is that that F-16 was defective; it was defectively designed and manufactured and, what is even worse, General Dynamics knew it was defective and it failed to warn the Air Force or my husband that it could kill him. General Dynamics had complete design lattitude with that jet as well as a duty to warn the Air Force of any and all problems with the jet, but they choose not to. To really understand what happened to Ted Harduvel you have to look at the factory at Fort Worth in the sping of 1982. They sent out a world wide team to inspect every airbase with F-16s in the entire world; they inspected all but one base and found that there was a system wide chafing problem. They began to assess the problem and initiate an acceptable fix knowing about the potential problem. Ted's airplane, tail number 0692, came off the assembly line in the June-July, 1982, time frame to be accepted by the Air Force on the 25th of August. Seven days later they issued Time Compliance Technical Order (T.C.T.O.) 1078, which stated that there would be a one time inspection of all aircraft at the 100 hour mark to check for loose or oversized screws, wire chafing, and problems of that nature. However, General Dynamics never walked across the factory to the New Jet get ready department to look for oversized screws in those aircraft; if they had, it might have delayed the delivery date of F-16 #0692. They requested a PCOL letter asking for waivers for some defects, assuring the Air Force that this could wait and to accept the airplane as is on August 25, 1982.

Do you know what was their motive? Pilot safety...no profit. You see, General Dynamics collects 14 million dollars the moment the Air Force accepts the jet. The Air Force trusts General Dynamics decision since the contractor had 300 engineers to the Air Forces' three member SPO team. They rely on the contractor's superior knowledge and resources; thus, in good faith, they, unknowingly, accepted a defective jet, which 80 days later killed my husband. Once the Air Force signs on the dotted line, General Dynamics gets to cash the check, even if this jet had screws that were sticking into wire bundles causing chafing problems. They knew in March, 1982, that they had a world wide problem with electrical wire harness chafing and that there were going to be electrical malfunctions in an electrcal jet. General Dynamics even decided to make a video tape like the one you are about to see to let maintenance men know how to fix their mistakes. However, there was an even bigger issue at stake; who will pay to fix these design and manufacture defects? Certainly not General Dynamics, the company that only profited 174 million dollars in 1984 on world wide revenues of five billion dollars while they paid no Federal Income Taxes for the past four years; they didn't want to pay to fix their design defects because it was much more profitable to bill the taxpayer the more than one billion dollars it cost to fund the "Falcon Rally" fix programs. Please note the plural at the end of program, because there were two Falcon Rally programs; and, as of January 1, 1987, they are still fixing the chafing problems with T.C.T.O.s.

However, let me take a moment to briefly explain how a government contractor fixes a mistake. They can use either the straightforward, honest, above board approach known as the Notice of Deficiency (NOD), which states the problem and General Dynamics stops everything, fixes the defect and negotiates the payment; or, the ever popular, subliminal Time Compliance Technical Order (T.C.T.O), popularly known as "product improvements" which means that the Air Force (translated to you and I, the taxpayers) bear the cost. From a bottome line, profit point of view, General Dynamics used the T.C.T.O.s.

Gentlemen, you have before you over 100 T.C.T.O.s; product improvements, like T.C.T.O. #1078, to insure that the electrical system that delivered the proper quality of electricity to the instruments. You also have in front of you over 300 separate instances of Maintenance Deficiency Reports, which list item after item of electrical problems. Repeatedly the contractor states, "this is the first write-up on this problem; thus, it must be an isolated incident." There was an incident in aircraft #0696, manufactured 4 spots down the assembly line from tail #0692 that declared an in-flight emergency and had to return to base and another F-16 that had a fire so bad it had burned through 30 different wires, even after the battery was shut off, the wires kep burning. I was told of yet another incident with an aircraft at Hill AFB this summer that had a fire in the right hand strake panel where it actually burned through the skin of the aircraft.

You asked about the role of the Air Force and General Dynamics after the accident. The Air Force, as an entity, was very difficult to get information out of. Unfortunately, in order to completely and thoroughly investigate an aircraft accident or incident, the Air Force relies quite heavily on contractor cooperation to do the necessary bench testing and reconstruction of the wreckage; in order to assure a complete and thorough investigation, the Air Force must guarantee the contracter that the information will not be released to anyone outside of the military; the term for this is priviledged information and it is non-releasable. I can understand the need to get honest, truthful information so that the real cause can be identified and future accidents be prevented; however, in our case this only served to obscure the truth and cover up the problem. The Air Force, as individual beings, were to a man as cooperative and helpful as possible. Officially, the Air Force had to remain neutral; however each and every guy, from E-1 through 4 star General, when I looked them in the eye and said that I needed their help answered with "you got it Jan, what do you need?" It seems that I was not the only person who questored the F-16's role in my husband's demise. As you can see from the evidence before you almost all of our information came from the Air Force itself in the form of Freedom of Information requests. We could not have gotten as far as we did without the cooperation of the Air Force, both in an official and individual capacity. The Air Force has nothing to hide. With the exception of priviledged information they complied fully and completely with or requests and they have paid close attention to the progress. The Air Force genuinely cares about the pilots that die in those airplanes. These are their brothers-in-arms, comrades and sons. During combat and remote duty tours they form a tight bond that can only be appreciated by people who fly and possibly die together. That fraternity is as close knit a group as any and what happens to one happens to all. To a man, they wanted as much as I did to learn the truth of what happened; they have a vested interesdt in the outcome; their prime concern is to keep their pilots logging an equal number of take offs and landings. The Air Force cares about its men and I am here to tell you that they cared about this wife also. No one wants the F-16 fixed and working properly more than the US Air Force. After the verdict, armed with the information we uncovered during the trial, I made an official request to the Air Force Inspector General, Lt Gen Robert Springer, for the Air Force to offically reopen the Accident Investigation Board, examine the evidence, and to change the cause of the accident

Pilot Error to elecrical malfunction. General Jack Gregory informed me that the Board was reopned on Aug 13, 1987 and the evidence I provided to them would be considered. The board concluded its investigaton on Oct 5, 1987.

I wish that I could say that General Dynamics conduct after the accident was the same. From the beginning of the lawsuit, we had requested quite specific information regarding the electrical system, wiring diagrams and support activity report digests; up until 2 days before the trial they refused to produce those documents. They showed up at the pre-trial conference empty handed. What were they hiding? A Federal Magistrate finally ordered the documents produced, at the factory in Ft Worth, Texas, at 9:30 the following morning. My investigating attorney, Mr Pappadakis, made the arrangements and he and I jumped on a jet at 4:00 in the morning to be at the factory at 9:00 a. m. They did not produce the first document until 3 hours later, after numerous phone calls to the judge back in Tampa. We even went so far as to draw a picture of the cover of one of the publications to fully describe what we were looking for. After viewing the documents, it does not surprise me that they tried so hard to obviate the requests: our electrical expert based his opinion on those documents. When we were asking for the exact configuration of Ted's airplane, took Mr Alexander into a roon with 75,000 microfiche records and No Index and said there they are. It goes on and on. They sought to block our access at every turn. It appears that they had much to gain by keeping us devoid of information. Thankfully, the Air Force came through for us. They had a lot to hide and they are still hiding information. You don't see too many documents produced here with the Name General

Dynamics on them, and they haven't shown any new inclination to change their stonewalling policy.

Gentlemen, there is a crime being committed here, and that is why I have come before you. In my opinion, it is heinous that more than one fighter pilot has died because a military contractor decided not to tell the Air Force of it's potentially fatal design and manufacturing defects; rather, it chose the path of maximum profits by stringing out a fix. Instead of grounding the airplane, or beginning a a maximum effort to fix the mistakes in the shortest amount of time, they left the fatal flaws and let pilots go on flying and dying. The Fighting Falcon became the Falling Falcon, and it certainly has the appellation of being a widowmaker like the last single engine fighter. David Moats was the first American pilot to die in the F-16; his emergency power unit fired in flight due to electrical malfunction and the nose of the airplane pitched down violently. Apparently that this was also a design defect, because the airplane was rigged to pitch the nose down at rig neutral in the event of a electrical malfunction. Can you imagine flying a jet at 500 miles per hour 1500 feet above the ground and the nose suddenly pitches down ? I wonder if that was what the speaker in the General Dynamics videotape meant by "some interesting moments for the pilot?" Bullet Robinson died when he clipped the top of a mountain on July 6, 1982. The conclusion was, of course, pilot error; he was heads down in cockpit by his left hand side. Was he resetting electrical switches also? When you get an electrical malfunction light, the reset switches as located down besides your left hip; you have to bring you head down and to the left to see these switches to reset them. In a bubble canopy like the F-16, this is bound to "induce vertigo or disorientation"

I would like to take this opportunity to discuss some of the instruments in the F-16. The Attitude Direction Indicator (ADI) is the only primary indicator that tells a pilot whether you are nose high or low and it is located down between the pilot's knees. There is a clear warning in the Dash-1, which is the pilot's handbook, regarding the ADI, and it states, "WARNING: It is possible fo the primary attitude and/or heading to be in error with no off flag displayed!" Does that mean that it may or may not be accurate and it may or may not tell you? It refers the pilot to the Standby Attitude Indicator (SAI), which is the only other instrument in the entire aircraft that can tell a pilot whether he is nose high or low. This little, self-contained attitude indicator costs only $3,833. and was designed by the French in 1965. They put this piece of equipment in a 14 million dollar state of the art, turn on a dime jet, yet is isn't fully acrobatic; it hits the stops at plus 70 degrees and then tumbles and is inaccurate. It precesses in a high G environment, yet it is the only backup indicator in an airplane that can pull so many sustained g loads. Of course, at the time, there was a fully acrobatic standby indicator available but, you see, it cost between 40-50K and that would have cut into their profits. Ted's standby attitude indicator was captured at impact reading 40 degrees nose high - over 115 degrees difference in actual impact. Not even close. Once again, money was at the root of the obvious solution to the problem. It is ironic that I won a 3.1 million dollar judgement from General Dynamics - just about the amount it would have cost to put a fully acrobatic SAI in the Air Forces fleet of F-16's. Four months after Bullet Robinson died

Frank Pinerio crashed at the Avon Park bombing range, at night, coming off a bombing run. The cause was again Pilot Errror; he got disoriented and flew his jet into the ground: At impact, he had been working electrical sitches in the left hand console to reinstate electrical power to his airplane. Seven days after Frank Pinerio dies my husband impacts the side of a mountain. I, my three attorney's, 3 F-16 pilots and a six member jury concluded that the problem Ted announced was an electrical malfunction in the right hand strake panel caused by oversize screws protruding into essenial busses; short circuits producing irregular electricity adversely affecting his intruments and caused a multitude of malfunctions and problems. Kapton wire insulation is extremely susceptible to chafing and the rest, as they say, is history. The only error these 4 pilots made was the error of strapping into defective airplanes. Ted was the 4th guy killed in the F-16. As of today there are 30 dead American pilots and over 70 destroyed airplanes. Yes, we are talking about economics. Corprate profits versus sons, brothers, lovers and fathers along with our National security. It appears that General Dynamics cares about it's profits. It doesn't hurt it profit structure to have the Air Force buy 70 replacement F-16's at 14 million dollars a copy - it results in a cool 980 million dollars in addiional sales. It certainly didn't mourn the loss of a son the way General Moats did, or a brother te way Mr Pinerio did, or a lover the way I did or a father the way my daughter Kiki did. Make no mistake about this; not one of us would have said anything if our loved ones had died for their country - they were fighter pilots and I was a fighter pilot's wife. We all knew that there was a chance that our men might come home on their shield instead of with it. We were prepared for our men to die for their country...I have a strong objection to my husband dying for General Dynamics. General Dynamics knew about the fleetwide chafing problem as far back as 1980 - less than one year after it entered the service but they choose to fix it piecemeal - sorta like putting a bandaid on a severed artery. They knew in March of 1982 but the Air Force didn't have any corporate knowledge until 1984. Interesting to note that the accident rate declined in 1985-1986. Are the pilots flying that jet any better than Ted, or are they more informed about the problems? They can now read in the Dash 1 that their only attitude indicator MAY OR MAY NOT annunciate its failure wih flags; they now know that their ONLY backup indicator is unreliable and preceses during high G maneuvers and that it has to be recaged after each maneuver; they now know that the engine stalls at particular parameters and to stay out of those parameters or it will flame out; and most outrageously, the student pilots are now told to stay out of the clouds because you can't see the HUD display against a cloudy background. What happens if we try to fight a war in the European Theater? Request that we only engage the enemy on a clear day?

How many guys have to die before someone stands up and says "You are killing our best and our brightest?" These are less guys that the enemy has to kill - General Dynamics has done it for them. Rest assured that General Dynamics certainly isn't going to tell you this. As recently as April 22, 1987 they denied in Federal Court in Tampa that there never was and still is not a problem in the F-16. To this day they maintain that an adverse physical reaction to the commonly prescribed antibiotic drug Bactrim (despite an Armed Forces Institute of Pathology report finding no trace of that drug in his system) caused his demise. Call Captain Jerry Thomas at the Pentagon and he will tell you that the F-16 has the best safety record of any single engine fighter in the inventory. What he doesn't tell you is that all the state of the art fighter planes designed and built since 1960 have 2 engines: F-4, F-5, F-14, F-15,and F-18 all are twin engine models. What he doesn't tell you is that the last single engine fighter was built in the 60's and it was nicknamed the Widowmaker. The Navy doesn't have any single engine fighters because they feel that they just dont have the reliability of multi-engines. The F-16 has the best ejection seat in the world, the ACES II and even it kills pilots. When General Dynamics designed this jet they felt that wind blast was enough to peel the canopy off to facilitate ejection - great when you are screaming along at 500 knots, but sadly ineffective when you are spinning like a leaf out of control as vividly protrayed in the movie Top Gun. At least 2 F-16 pilots were killed when they rocketed up in their ejection seat only to impact the canopy. There is just seemingly no end to the gravestones in General Dynamics cemetary of shame.

Gentlemen, you have the power to do something about this unconscionable behavior being perpetrated in the name of huge profits. You can call them to task on it and you can explain it to them in the only language they can understand...dollars and cents. Make them pay for their mistakes. Make them face the full consequences of their actions. Send out a signal loud and clear that they will both as a coporation as well as individuals understand: They will be held liable for their actions. What they did through misrepresentation, deceit and malfeasance was tantamount to manslaughter. Corporations don't understand feelings, they don't hurt when my child writes a letter to Santa Claus asking for her daddy back; the only thing that corporation understands is the bottom line. And the bottom line is this: Fine them and continue to fine them until you are satisfied that they have fixed the problems in the F-16. Don't allow them to pass the costs along to the Air Force as they have been wont to do in the past. They have over 23,000 employees and yet they have only 5 guys assigned to the aerospace safety office. I wonder how many salesmen they have? Take a closer look at the procurement procedures and if there isn't a division to oversee Notices of Deficiency then create one. They are currently bidding along with the Rockwell corporation (who is one of the cases that appealed to the Supreme Court for immunity from prosecution) for the next fighter contract - don't let them get that contract until the F-16 is fixed. Make them make the F-16 live up to its advertising as not only the best fighter jet on earth, as well as the safest. Make them prove to you that they have the knowhow and quality control to create a first-rate product When a company is held accountable for its product, it tends to take great care with that product. As we speak, defense contractors are busy lobbying the legislature for immunity from prosecution under the guise of not having judges second guessing the Pentagon. 1500 defense contractors. along with the Justice department were at the Supreme Court on Tuesday, Oct 13, 1987 actively petitioning the Supreme Court to extend the FERES doctrine, which provides the Government immunity from prosecution, to them. Incredibly, they are categorically stating that if they build a product for the government and if that product is defective then they can't be sued.

This is the other reason I am here today before you. There is a chlling wind blowing across this country and it is going to abridge the rights of citizens to due process of law: General Dynamics, Rockwell, Grumman and United Technology just to name a few, are all appealing verdicts against them for shoddy design and manufacturing defects asserting the Military Contractors Defense which states that if a contractor manufactures a product for the military then they cannot be held liable for that product. In essense, the contractor becomes the Crown. Legislation is pending in the House of Representatives under the name of the Uniform Product Safety Act of 1987: they say that if their products conforms to industry standards (whether or not they actually do is of no consquence) it provides an unrebuttable presumption. Like I said earlier, I am not an attorney nor am I an electrical or aerospace engineer, I just know that if people are allowed to act with impunity, many of them will. General Dynamics has already proved that it has no conscience regarding publically identifying and fixing it's mistakes: If you shield them from prosecution you are giving them Carte Blanch - all the lattitude in the world and no accountability. We have seen what one contractor has done when it CAN be held liable for their actions, I shudder to think of the malfeasance that will occur if they are immune from prosecution. I can almost picture a future advertisement for General Dynamics saying "What is Good for General Dynamics is good for the USA". No one is saying that I want to gut the military, I am not saying that we should spend less for the defense of the United States and no one is suggesting that we return to 60's techology as we approach the 90's. All I am saying is lets make really cetain that we are getting what we have paid for. Make

General Dynamics and all militry contrators live up to their advertising and don't pay them until they bring their product up to Military expecations. I really believe that the security of our country is at stake. The granting of immunity to defense contractors will not serve to enhance our military's acquisition of first rate equipment; rather it will encourage, if not reward, defense contractors for producing a poorly designed and manufactured piece of equipment for our fighting men and women to die in. After all, they profit on the original purchase of the equipment and they profit on the replacement piece. I am not opposed to anyone making a profit, however, I truly believe that that the greater the accountability for negligence, the greater the standard of care.

Ted Harduvel would have celebrated his 40th birthday on Wednesday, please don't let him have died in vain.

Senator PROXMIRE. Thank you very much, Mrs. Harduvel.

Mr. Acosta, please proceed.

STATEMENT OF HOWARD M. ACOSTA, PARTNER, RAHDERT, ACOSTA & DICKSON, ATTORNEY FOR JANET S. HARDUVEL

Mr. ACOSTA. Thank you, Senator Proxmire. I am very honored to be here. I am a partner in the firm of Rahdert, Acosta & Dickson, in St. Petersburg, FL, and I am a former naval aviator. I have represented Janet Harduvel since 1983.

A jury trial was held in April of this year in which we prevailed against General Dynamics. The jury found that the F-16 was negligently manufactured, that it was negligently designed, that is was negligently accompanied by warnings as to its defective condition, that it was defectively manufactured, that it was defectively designed, and that it was defective because it was unaccompanied by warnings.

The trial judge reviewed a huge transcript. He reviewed over 100 pages of arguments, and the trial judge affirmed the verdict in our favor.

We think that the trial has some serious implications for the F-16 program. We think there could have been a lot more done to save the life of the pilot and to save the loss of an $8.2 million aircraft. There is no question that Capt. Ted Harduvel was one of the most qualified Air Force fighter pilots in the United States. He is the kind of American serviceman that we do not feel that this country can afford to lose. I am not going to repeat all of his qualifications. He was a top gun and the best.

Janet is correct. After the crash she started receiving letters. We got a letter from a colonel who said, "I can't believe that it was Ted's fault. This was probably something wrong with the airplane." That's what got her started. She came to me, and we took off with the case.

Captain Harduvel's jet was only 75 hours old at the time of the incident. It was brand new. He was on a low-level training mission. He was an instructor pilot. One of the other pilots was also a top gun.

Just a few minutes after takeoff he found himself entering—found himself with a serious problem with his electrical system. A huge malfunction occurred. He started to turn back to base and found himself in clouds. The next thing he knew, he was going down and he didn't know whether he was up-side down or right-side up.

What is important about that is that he had no instruments to tell him what direction he was going. He pulled back on the stick, hoping he would climb up out of the clouds. But without instruments to tell him his altitude, he went down, and he went down almost straight into the backside of a ridge at about 80 degrees nose down at 600 miles an hour. There was nothing left.

General Dynamics was invited to participate in the crash investigation along with the Air Force, and they had a representative there just a few days after the accident occurred at the accident scene. I think there are some potential problems when you have two interested parties involved in an investigation. General Dynamics found the gyros that are what Captain Harduvel was relying upon, and they sent them to the subcontractor to have them examined. The subcontractor found that they could not confirm gyro rotation.

What they should have said is that, "We found that the gyros weren't operating." They didn't say that. They said it in a different way, and I think that it misled the Air Force and misled a lot of people about the cause of the crash.

We had a highly trained metallurgist look at the photographs, which are very, very clear photographs, of the gyro damage. I brought the originals with me. You can see that this thing was quite damaged. He was able to look at them and conclude from the factfinding that was found by the subcontractor and the photographs that these gyros were not operating at impact and even General Dynamics' own expert said that he couldn't tell us that there were any facts to indicate that they were operating up to 1 minute before the crash occurred.

So the gyros weren't operating. The next step was to figure out why. The reason was that the jet was defectively wired.

I did want to say that I would make a suggestion. That is that when the Air Force conducts a crash investigation and the contractor is involved, that the Air Force do something to get an independent verification of some of the findings, at least some of the crucial findings. I think perhaps if that had been done in this case, we would have learned a lot sooner what the true cause of the crash was. It took us a long time to get this information.

The F-16 back in 1982, according to the experts that we had reviewing the materials, one who was a director of safety at NASA who reviews wiring diagrams for the space shuttle program and who reviewed the wiring diagram for the F-16, said that the F-16 didn't meet military specifications with respect to wiring. He said that the F-16 did not conform to industry standards with respect to the way it was wired.

The F-16 has all of its instrument wiring and all the distribution systems for the electrical power in one area of the airplane. They are all jammed together. They funnel the wire and they lose redundancy. We think that's dangerous. We don't think it should be done that way.

We found that all of these electrical buses were too close together. If you have a short in one, before you know it spreads to all of them, and we're positive that that's what happened in our case.

One of the most telling bits of evidence that we had was film that was produced by General Dynamics. It was started before our crash. It was started in March 1982. At least that's when they started planning for it. But they didn't complete it until long after our crash.

If you look at that film—part of it was shown on "60 Minutes" last night—it just about tracks our flight. The pilots say the identical things that our pilots said.

Senator **Proxmire**. We are going to show part of that film in a little bit.

Mr. **Acosta**. It is an admission. It says in the film, "We didn't reduce the wire chafing. Our engineers can't reduce it to routine proportions." Well, that is a defect, and I think that's what most people feel when they see the film.

So I think there are two big questions: Did General Dynamics adequately warn the Air Force? Should the Air Force have known more? These are questions that need to be answered. The jury said that General Dynamics didn't adequately warn the Air Force.

Janet mentioned the product improvement program. Either the Air Force or General Dynamics can issue one of those. In our case there weren't any. In fact, I don't think there has ever been a notice of deficiency, which means that the airplane has a defect in it and that General Dynamics, the contractor, has to fix it.

Instead, they file these notices of improvement and they try to improve their reliability over a period of time in the same way you improve a Chevrolet from one time to the next. Well, that wasn't what was wrong with our airplane. It had defects. It didn't meet military specifications. And there should have been notices of deficiency issued. And those should have been paid for and taken care of by the contractor instead of stretched out in some long program. And in our case it resulted in the loss of one of America's finest pilots.

General Dynamics at the beginning of this year only had four people in its 23,000-person plant in the aerospace safety department. I thought that was a little bit unusual. I think they should have had more people reviewing crash investigations, trying to figure out what was wrong with the airplane.

They knew they had a lot of problems before our crash. They had over 200 filed service reports of wire chafing—I take that back; it was about 138 before the crash. After the crash there had been another 200. There are over 300 of these things. And they have only five people in aerospace safety. I am sure they have other people in other areas of safety in the plant. But these guys are the ones who know what happens when the jet crashes and how to deal with it. I think they need more of them.

Senator PROXMIRE. You have about a minute to go, Mr. Acosta.

Mr. ACOSTA. Well, let me get to the end real fast. I suppose it is easier to blame the deceased pilot than it is to conduct an exhaustive investigation regarding a complex aircraft design and manufacturing problem. I think that is what happened in our case. I think the bottom line is money. There were defects in the airplane that they didn't want to take on and fix and admit and fess up to and take care of. They wanted to hide it and keep it underground.

I think that profit is really good for America, but sometimes giant corporations become so absorbed in making profits that the many other things which are necessary for a good America are ignored or set aside.

I think we have to be vigilant in guarding against these complex, bureaucratic systems designed to make profits, at the unnecessary expense of individual and taxpayer rights.

I hope our endeavor will be considered, in part, an effort to protect those rights and improve the military aircraft procurement program.

[The prepared statement of Mr. Acosta follows:]

PREPARED STATEMENT OF HOWARD M. ACOSTA

My name is Howard M. Acosta and I am very honored to be invited to testify before the Subcommittee on National Security Economics. I am a partner in the law firm of Rahdert, Acosta & Dickson, P.A., and I practice law in St. Petersburg, Florida. Personal injury and wrongful death are my primary areas of practice.

I am a Naval Reserve officer and a Naval Aviator. (I have not been active since 1978.)

I represent the Estate of Capt. Theodore Harduvel, USAF, in a products liability suit against the General Dynamics Corporation. The evidence and issues in the litigation have important implications regarding the F-16 program and Air Force procurement policies.

Ted Harduvel was killed flying a brand-new F-16 on November 15, 1982. In April, 1987 a Federal jury found that his Air Force jet was:

(1) Negligently manufactured;

(2) Negligently designed;

(3) Negligently unaccompanied by warnings as to its defective condition;

(4) Defectively manufactured;

(5) Defectively designed;

(6) Defective because it was unaccompanied by appropriate warnings of the defective condition.

(General Dynamics knew or should have known about these conditions and the Air Force was unaware of them.)

Recently, the trial judge, after reviewing over 100 pages of argument, a 2,000+ page transcript of the trial testimony, numerous exhibits and after hearing two hours of oral argument, affirmed the jury verdict with the exception that two of the three failure to warn issues were set aside. (No reason given.) The trial judge permitted to stand the jury's finding that General Dynamics was not entitled to a military contractor defense. In so doing, the trial judge affirmed a finding that the Air Force was not warned by General Dynamics of design defects.

Lastly, the trial judge affirmed the jury's finding that there was no pilot error at the time of the crash. I believe that the findings of the jury and the trial judge accurately illustrate problems in the F-16 program and the evidence at trial suggested that much more could have been done to prevent loss of life and loss of an $8.2-million aircraft.

There is no question that Capt. Theodore Harduvel was one of the most highly qualified F-16 pilots in the Air Force. He is the kind of American serviceman that this country cannot afford to lose. Janet Harduvel in her statement has discussed thoroughly his many qualifications, so I will not repeat them here. However, I strongly believe his outstanding credentials were a significant factor in the jury's decision.

Shortly after Capt. Harduvel's death, many of his friends contacted Mrs. Harduvel and suggested they did not believe he had committed pilot error. One colonel even suggested that the problem lie within the aircraft. Mrs. Harduvel was convinced that her husband did not cause his own death and sought to find out why he died. She contacted me in early January of 1983.

The complete official Air Force accident investigation is confidential. Only the factual findings were revealed to us. General Dynamics was an invited participant in the crash investigation and had investigators at the accident site a few days after the crash. One of the key results in General Dynamics' investigation was biased, if not misleading. I'll explain further below.

Through our independent investigation, we found that Capt. Harduvel's F-16 experienced a massive electrical malfunction which caused him to crash. As was mentioned above, Harduvel's F-16 was almost brand new. It had been delivered to the Air Force about 2-1/2 months before the crash and had been flown only 75 hours.

Capt. Harduvel's last flight was a low level training mission to a local Korean bombing range. He was the instructor pilot and flying his aircraft in the middle of a three-plane formation. About eight or nine minutes after takeoff, the malfunction occurred causing Capt. Harduvel to immediately return to his base at Kunson, Korea.

As Harduvel turned toward Kunson, he encountered heavy cloud cover which was penetrated. Within the clouds he lost his primary attitude reference system due to a loss of electrical service. Without the attitude reference system, it was impossible for him to know whether he was rightside-up, upside down, or rolling to some position in between. One of the pivotal issues at trial was whether or not the attitude gyros were working just prior to impact.

General Dynamics retrieved the primary gyros from the crash site. It sent them to its subcontractor for examination. If they were found not to be rotating at impact, a strong presumption would arise regarding loss of electrical power. It was well known at the time that loss of electrical service was a very serious problem in the F-16. (The parties agreed the gyros were not themselves defective.' The factual findings of the subcontractor examining the gyros, although somewhat incomplete, were misinterpreted. Conclusions favorable to the manufacturer were erroneously made.

The gyro examination report is contained in the official Air Force accident investigation report. In it, the subcontractor made many findings which contraindicated proper rotation of the gyros at impact. Rather than conclude that the gyros were not rotating, they merely concluded that rotation could not be confirmed. In light of the factual findings, the conclusion was misleading, biased and far short of the truth. A highly qualified failure analysis expert who was also a metallurgist testified at trial that the gyros were not operating at impact. Even General Dynamics' own gyro expert testified that he could not identify one single fact demonstrating gyro operation during the last one-minute of flight. Hence, the Air Force was misled as to the cause of the crash. In order to avoid bias and improve accuracy in the investigative process, I believe in the future that the Air Force should consider seeking independent verification of investigative findings and conclusions made by the contractor.

Overall, the evidence at trial clearly proved that the attitude reference system malfunctioned. If the jet was operating normally, the gyros also should have been operating normally. Hence, the malfunction of the gyros was strong evidence of an F-16 defect.

The reason for the gyro failure was both defective design and manufacture of the wiring system in the F-16. At trial, six expert witnesses testified that Capt. Harduvel's F-16 experienced a massive electrical system failure. Perhaps the most crucial testimony came from one of the directors of NASA safety. He is an electrical engineer who reviews electrical wiring specifications for space shuttle payloads. He reviewed the wiring diagrams for the F-16 and concluded that the wiring design did not conform to industry standards.

The problem with the F-16 is the manner in which it was wired. In a General Dynamics' videotape, it is said the F-16's eleven miles of wiring is subjected to high "G" forces and vibration. If not protected properly, wires easily chafe to cause short circuits, electrical transients, electrical fires and overall disruption of electrical service. Wire chafing is a hazard which has been long known by the aerospace industry and there is a particular military specification (5088) which prohibits wire chafing under any circumstances. There was an abundance of testimony that General Dynamics failed to meet the military specification with respect to the F-16.

One of the reasons that the F-16 failed to meet industry standards is that there was too much wire in too small a place. Moreover, there were no inhibitors or firebreaks to stop electrical faults from spreading from one electrical compartment to another. By tying many wire bundles together and funnelling them from panel to panel, safety critical redundancy was lost. The design was defective, unreasonably dangerous and it caused the malfunction of critical flight safety systems, including the attitude reference system.

There was also a great deal of evidence that Capt. Harduvel's F-16 was defectively manufactured. An inspection of seven aircraft coming off the same assembly line shortly after Harduvel's F-16 showed that screws had been improperly installed so that they protruded into critical wire harnesses in the area where electrical power is distributed to the instruments. The screws had caused electrical shorts resulting in the burning of several wires. There was a convincing inference that the same problem existed in Harduvel's F-16. Action had been taken to correct the protruding screw problem on the seven assembly line aircraft, however, no correction was performed on Harduvel's F-16 which had at that time been accepted for delivery by the Air Force.

Perhaps the most telling piece of evidence that there was a fleet-wide problem with the F-16 was a videotape film produced by General Dynamics for the Air Force. Months before Capt. Harduvel's crash, General Dynamics in conjunction with the Air Force began to investigate the wire chafing problem. During the years 1980 -'82, the crash rate for the F-16 was very high. I believe it was 4 to 6 times higher than what it is today. In any event, General Dynamics planned to produce a film warning the Air Force of wire chafing problems before the crash, but did not release it to the Air Force until 8 - 10 months after the crash. The film is titled "Electrical Wire Harness Chafing in the F-16". It describes the nature of the problem and it is clear that the film was designed to warn the Air Force. It explains that a small amount of wire chafing can create "severe" problems which can result in a "disaster". It warned that the problems were not yet reduced to "routine proportions" by General Dynamics design and electrical engineers and it further warned that wire chafing was a problem "easily overlooked" by Air Force maintenance personnel. The film noted that one of the most "frequent problems is a harness pushed against a protruding screw, which acts as a miniature saw blade steadily grinding away at the insulation." It states that the F-16's electrical system has more than enough power to "self-destruct". We proved that is precisely what happened with respect to Capt. Harduvel's F-16.

The wire chafing film is evidence that General Dynamics failed to timely warn the Air Force and it is also an admission that the F-16 in general was defectively designed or manufactured.

Two questions are raised. Did General Dynamics adequately warn the Air Force? In the alternative, should the Air Force have scrutinized more closely the many wire chafing problems it was aware of long before Capt. Harduvel's crash?

The General Dynamics F-16 contract with the Air Force provides two primary methods which permit General Dynamics to change or modify the F-16 electrical system. The first is called a product improvement. This method permits the contractor to improve reliability by making changes at the plant and in the field. The Air Force pays the bill. The product improvement should not be used to correct defective conditions including wire chafing. The appropriate way for the manufacturer under the contract to correct defects in the product is to give the Air Force a notice of deficiency. This method is used in situations where the manufacturer of the aircraft fails to meet military specifications. When a notice or correction of deficiency is issued by General Dynamics, it cuts into the company's profits. General Dynamics therefore, has a motive not to warn the Air Force about any condition which fails to meet military specification or is otherwise a defect. General Dynamics never issued a correction or notice of deficiency regarding the wire chafing defects present in the F-16.

Additionally, the Air Force can notify General Dynamics of a defect requiring correction. It failed to do so. Instead, it permitted General Dynamics to fix the wire chafing problems over time and the Air Force absorbed the cost. The Air Force appears to be undermanned with respect to the manpower necessary to check the design and manufacture of the F-16 from a safety point of view. There was abundant trial testimony that the Air Force depends upon General Dynamics to design and build the F-16 for it. General Dynamics provided the Air Force with all of the specifications for the electrical system in a two or three step process. These included the submission of air vehicle specifications, drawings, blueprints and detailed specifications. General Dynamics had complete design latitude and the Air Force had little or no choice in the actual design itself. (It should be noted that the F-16 is sold and made on the world market. It is co-produced by General Dynamics and several foreign countries. It is believed that part of the fuselage in Capt. Harduvel's F-16 was produced in Belgium. The F-16 is sold to Venezuela, Israel, Egypt, Pakistan, Korea, Norway, the Netherlands, Belgium, Denmark and perhaps others.)

The F-16 project resulted from an Air Force desire in the 1960s to have a low cost, lightweight fighter for use during the late 1970s, 1980s, and early 1990s. Five or six aerospace companies submitted proposals in the early 1970s and the Pentagon decided it would sponsor a competition between two selectees. Northrup developed an aircraft and General Dynamics developed the F-16. The Northrup jet was completely different from the F-16. It had two engines and a twin tail. The F-16 is a single engine, single tail aircraft. However, both met the general performance desires of the Pentagon. A fly-off was held and the cheaper F-16 was selected. In 1982, the F-16 sold for about $8.2-million. Today, it sells for $14-million to $17-million. (We hope that the manufacturer does not argue that lawsuits such as this increase the cost of military products. Clearly, ours is the first suit involving the F-16 and it had nothing to do with the 100% increase in cost over the last five years.)

In its role as designer, General Dynamics chose from many alternatives and then the Air Force reviewed the design simply to determine whether or not it would work. The Air Force simply does not have the expertise, capacity or know-how, to insure that defective conditions do not exist in the F-16. Air Force engineers simply review the design to see if, in their opinion, the specifications submitted by General Dynamics would meet the Air Force performance requirements.

It is also noteworthy that as a part of its obligation under the F-16 contracts, General Dynamics determines what testing is necessary and it prepares all the test requirements and test equipment. A General Dynamics vice president testified at trial that it was not normal for the Air Force even to witness the tests. When an F-16 is ready for delivery to the Air Force, General Dynamics commonly asks that the Air Force sign certain specification waivers or deviation documents. It did in Harduvel's case. General Dynamics prepares the waivers or deviations, including technical portions, and submits them. There was substantial testimony that the Air Force clearly relies upon General Dynamics' expertise when it signs the acceptance documents.

When modifications or changes to the F-16 are made to improve its reliability, again, General Dynamics prepares the specifications for the changes and submits the documents to the Air Force for approval. It should be noted, that one Air Force-employed engineer testified that the government does not review everything General Dynamics does with respect to the F-16 design. He stated that General Dynamics has approximately 100 employees to every one government employee. Additionally, 70% of the work is done by subcontractors making the overall number of contractor employees much higher. He suggested that there may be as many as 300 contractor employees doing detailed design work for every one government employee trying to monitor and keep track of it.

One of the Air Force F-16 managers testified that the government relies heavily on the expertise of General Dynamics and that pursuant to the contract, General Dynamics is required to warn the government of problems because it generally discovers any deficiencies before the government. General Dynamics has approximately 23,000 employees at its Dallas-Fort Worth F-16 plant. At the beginning of this year, there were only 4 General Dynamics employees in the aerospace safety department. The Air Force did not have the ability to adequately determine that the F-16 was in compliance with contract wiring specifications and I believe that it is also clear that General Dynamics was not properly monitoring manufacture of the jet from a safety point of view. Hence, I do not feel the Air Force should rely heavily on the contractor for safety warnings.

General Dynamics sought at trial to invoke the military contractors defense which would make it immune. The defense requires a contractor to meet one of two criteria. If General Dynamics had only minimally participated in the design of the electrical system, then the defense would be available. However, it was undisputed that it was General Dynamics who designed the electrical system. The second aspect of the defense involves warnings to the Air Force. If General Dynamics had notified the Air Force of problems with the design and asked the Air Force if it would like to use suitable safe alternatives which the Air Force rejected, then General Dynamics would have the immunity defense available to it. The jury found from the overwhelming evidence that the F-16 was defective and that General Dynamics failed to warn the Air Force as required for immunity.

I believe that there have been many F-16s lost as a result of wire chafing. Since the trial, we have obtained approximately 200 additional reports of wire chafing problems in the F-16. These have occurred subsequent to 1982. Many of these incidents involve chafing and electrical fires in the same airframe compartments as the Harduvel incident. Apparently, General Dynamics to this date has not reduced wire chafing to "routine proportions". Air Force maintenance personnel are warned to look for the problem, but I wonder, is General Dynamics paying for it? It would seem that the Air Force is reluctant to issue notices or corrections of deficiency. We reviewed hundreds of thousands of documents with respect to Capt. Harduvel's crash. I recall no indication that the Air Force ever issued a notice of deficiency requiring the contractor to pay for a fix.

I'm sure that the Air Force engineers and personnel who monitor the F-16 program work very hard, and I am sure that they are conscientious individuals. However, I do not feel that the system adequately protects the government and Air Force pilots. Perhaps, the Air Force is understaffed. I think that the F-16 program would benefit if Air Force representatives were included in the F-16 design and component testing conducted by General Dynamics. Apparently it is presently an option which is seldom exercised by the Air Force. I also think that the Air Force might receive a better product if it was more actively involved in the manufacturing process. Perhaps periodic quality assurance inspections should be conducted on a routine basis.

Aside from national security considerations, I do not believe that the crash investigation should be confidential. In conducting a crash investigation, I believe both the contractor and the Air Force may have conflicts of interest which interfere with a fully objective investigation. The Air Force seeks to maintain an image of readiness and desires to maintain a high confidence level among its pilots. It does not want anyone to know it accepts deficient aircraft. These are certainly important considerations. However, determining the truth about what may have caused a crash should have priority and persons with valid interests should have access to all the findings. It is also my impression that careers within the Air Force and future careers in the aerospace industry for Air Force personnel may impede justified criticism of aircraft design or manufacturing process. The contractor certainly has an image to protect. If it turns out that the aircraft was defective and crashed as a result of a manufacturing defect or that it crashed as a result of manufacturing negligence, will the contractor have to pay for the aircraft? Should it be required to fix a problem in an entire fleet? Clearly, the contractor has interests which conflict with those necessary to conduct an objective investigation.

I suppose it's easier to blame a deceased pilot than it is to conduct an exhaustive investigation regarding a complex aircraft design or manufacturing problem. That is what seems to have occurred in the Harduvel case. If Janet Harduvel, I and the other attorneys working on the case had not been so tenacious, perhaps the wire chafing problems in the F-16 would never have been revealed to the public. The red tape and difficulty of such a legal investigation would probably deter most people from ever advancing such a case. There were over $200,000 in out-of-pocket expenses incurred through trial. If both the Air Force and the contractor knew that crash investigations would be more open to public scrutiny, then perhaps a higher degree of care would be observed in the manufacture and procurement of military aircraft and other weapons systems. Had it not been for the Freedom of Information Act, we would have discovered little in our case. General Dynamics objected to virtually every discovery request made by us and I'm worried because I feel that full disclosure of the information in their files would have revealed even more problems. For example, the F-16 utilizes "Kapton" wire. We did not know at the time of trial that Kapton wire was found by the Air Force to be unsafe. We also did not know that the Navy had tested it extensively and determined that it was very susceptible to wire chafing and burning. I understand that the Navy won't use it. What does General Dynamics know of Kapton wire? Will it take another death and resulting lawsuit to find out?

Profit is good for America but sometimes giant corporations become so absorbed in making profits that the many other things which are necessary for a good America are ignored or set aside. We must be vigilant and guard against complex bureaucratic systems designed to make profits at the unnecessary expense of individual and taxpayer rights. I hope that our endeavor in the Harduvel lawsuit will be considered in part an effort to protect those rights and improve the military aircraft procurement process.

Senator **Proxmire**. Before I call on Mr. Price, Mr. Acosta, would you take page 7 of your prepared statement and read that paragraph?

Mr. **Acosta**. Yes, sir. "I believe there have been many F-16's lost as a result of wire chafing. We have obtained approximately 200 reports of wire chafing problems in the F-16. These have occurred subsequent to 1982. Many of these incidents involve chafing and electrical fires in the same airframe compartments as the Harduvel incident. Apparently, General Dynamics to this date has not reduced the wire chafing problem to 'routine proportions.' Air Force maintenance personnel are warned to look for the problem, but I wonder, is General Dynamics paying for it? It would seem that the Air Force is reluctant to issue notices or corrections of deficiency. We reviewed hundreds of thousands of documents with respect to Captain Harduvel's crash. I recall no indication that the Air Force ever issued a notice of deficiency requiring the contractor to pay for a fix."

Senator **Proxmire**. In other words, what you are saying is that this isn't a one-plane problem, this is a widespread problem.

Mr. **Acosta**. That's correct, sir.

Senator **Proxmire**. All right, Mr. Price, go right ahead, sir.

STATEMENT OF CHARLES M. PRICE III, ATTORNEY, FISHER, GALLAGHER, PERRIN & LEWIS

Mr. **Price**. My name is Charlie Price. For almost 2 years, I have been one of the trial lawyers involved in the Harduvel case. This case involved approximately 4,000 to 5,000 hours of research over a 4-year period regarding the electrical systems in the F-16 aircraft.

Now, in the early version of the F-16 airplanes—we are talking between 1978 and 1984—there was a definite wire chafing problem in the aircraft. Approximately 138 wire chafing incidents were recorded between 1979 and 1981. An additional 338 chafing incidents have been reported between 1981 and today.

As result of this, a multitude of changes were actually initiated over the course of this time to protect against chafing in the right-hand strake area of the aircraft. Between 1982 and 1984 over 50 time-compliance technical orders and over 100 modifications at the factory were issued pertaining to this problem.

All these changes and all of these retrofits and added modifications have somewhat alleviated the situation today. But with respect to the wire chafing problem, I would like to divide this into two areas. The first is concerning a problem concerned with wire bundle chafing, which may still be in the F-16. And the second part, I would like to talk about General Dynamics activities with respect to correcting the wire bundle chafing problem.

First, a problem with the F-16 concerning the wire bundle chafing, as found by the jury in the Harduvel case, concerns the design of the system, the packaging of the electrical system in the right-hand strake of the aircraft.

In this one area of the aircraft, the aft power panel, the right-hand strake DC power panel, the right-hand strake AC power panel, the exterior power receptacle, the battery cable, the battery bus, generator power, feeder cables, AC essential bus, No. 2 DC essential bus, No. 1 and DC converter No. 2, along with various other distribution circuitbreaker panels and a multitude of wires are crammed into this one area.

The right-hand strake area of the aircraft is compartmentalized in name only, since each individual zone is adjacent and unprotected from the adjoining zones. In essence, what we have is a situation where all the electric brain of the F–16, so to speak, is condensed into this right-hand strake area. This close packing of the problem causes wires to chafe and rub together because they are so tightly packed and they become impinged on the panel doors, et cetera.

Now, the problem is compounded with respect to this because a wire bundle short or a wire bundle fire in this area can easily propagate from one panel to another and affect more than one bus.

So in addition to compounding the chafing problem, if a problem does develop with a short or a fire, it can affect all of these systems. This also makes the right-hand strake area much more vulnerable to shrapnel and groundfire because a single shot, an average shot, into this area could affect the entire electrical system, and that would certainly affect the survivability of the aircraft.

Now, I believe that at the minimum a study should be initiated to look into the design of this area, this problem in the right-hand strake area.

The second thing I wish to talk about is General Dynamics' role regarding these problems with the F–16 aircraft.

Now, the contract procurement system for our major military contractors should foster an environment in which flaws and defects of military equipment should be detected and appropriately corrected. The manufacturer is required to establish a system safety group.

They have the duty to follow the product in the field and to remain most knowledgeable about its design performance. They are paid for this responsibility, and they are in the best position to initiate proposals of important improvements or safety retrofits.

Under the F–16 contract, General Dynamics has the duty to improve or correct this product through contractual provisions. There's two ways that this can be accomplished.

The first is a product improvement. Now, a product improvement should improve the existing product, including performance capability, or et cetera, and accordingly, the cost is borne by the taxpayer rather than General Dynamics. Generally speaking, this process is fairly slow moving and is generally listed as of little urgency, since it is improving the product.

The second method is what is known as a notice of efficiency or notice of defect. That is the proper procedure to be utilized by the contractor when the product is in violation of the contract or a violation of military specification.

Now, unlike the product improvement procedure, this also can be an urgent procedure because safety of flight can be affected. Also, this deficiency, unlike product improvement, is corrected by General Dynamics under the cost provisions of the original contract, et cetera.

In the case at hand, talking about F–16's, the military specifications for the aircraft require that the aircraft be designed in such manner that wire bundle chafing shall not occur. However, as is demonstrated by numerous documents, as is demonstrated by the film, as is demonstrated by the many, many documents which we have introduced at trial, there was a wire bundle chafing problem in this aircraft.

This problem has continued over time to appear. There is a number of incidents, and I brought with me today the additional 338 incidents that have been reported that we found subsequent to the trial involving other incidents in F-16 aircraft.

A wire bundle fire in the right-hand strake area, and so forth.

Now, this wire bundle chafing problem, in my opinion, renders the F-16 in violation of the military specifications for the design and production of the aircraft and in my opinion should have been the subject of many notices of deficiency correction procedures instead of product improvement procedures.

Now, during my entire participation in this case, I do not recall seeing one instance where General Dynamics' corrective or initiated modifications regarding any problem on the F-16 through notice of deficiency procedure. I have seen or heard evidence of thousands, or many engineering change proposals and cost compliance technical orders for this aircraft under the product improvement procedure, including all of the ones for wire bundle chafing.

Of course, under the product improvement procedure the taxpayer is involved in bearing the cost and General Dynamics gets paid to fix it. This was a problem with the aircraft, the wire bundle chafing problem, and many of these so-called product improvements were to fix violations of military specification, military standards, and good engineering practice.

As an example of some of these incidents which we have discovered since the trial, there was an emergency incident where an F-16 was recovered after an electrical chafing and a wire bundle fire occurred in the right-hand strake area. The fire continued even after aircraft shutdown, the battery turnoff. Thirty or more wires had burned and three of the flight control channels had failed.

There is another incident involving an F-16 which we found subsequent to the trial that involved a wire bundle fire in the right-hand strake area——

Senator **Proxmire**. You have about 1 minute, Mr. Price.

Mr. **Price** [continuing]. In which the aircraft serial number was 810696, four serial numbers from Captain Harduvel's aircraft, 810692.

We were not provided nor did we have these documents prior to trial.

There are numerous other documents showing oversized screws and wire bundle chafing incidents in the aircraft.

I believe that our military personnel deserve better, the best and most effective weapons system that technology can produce.

When a problem such as occurred in the F-16 is present, it should be corrected, and it should be corrected under the proper procedures, and the person responsible for the problem, in this case General Dynamics, should be the one who bears the cost of the repair.

The extent of this situation, the extent of this problem, as well as how it has affected the taxpayer is something I believe certainly should be investigated.

Thank you.

[The prepared statement of Mr. Price follows:]

PREPARED STATEMENT OF CHARLES M. PRICE III

I. Introduction

It is my opinion that there is today an extreme and fatal flaw in the F-16 electrical system. For almost two years, I have been one of the trial lawyers involved in a case styled Harduvel vs. General Dynamics, et al, which involved the wrongful death of Captain Ted Harduvel, in the crash of an F-16 in Kunsan, Korea in 1982. This case involved approximately 4,000 to 5,000 hours of research over four years regarding the electrical system of the F-16.

II. History of the Problem

Originally, the F-16 was designed as a fighter. Later, it inherited an air to ground delivery role in which it would be exposed to ground fire. It is also a dog fighter expected to be involved in close-in fighter tactics in which aircraft cannon fire is expected. Certainly it is one of the most maneuverable and agile fighters in the world and it possesses good acceleration.

In early version F-16 airplanes, (1978-1984) there was a severe wire chafing problem that resulted in incidents and accidents. Some of these incidents went undiagnosed, because of the impact severity. Approximately 138 wire chafing incidents were recorded between 1979 and 1981. An additional 338 chafing incidents have been recorded between 1981 and today. As a result, a multitude of changes were initiated to protect against chafing in the Right Hand Strake area. Between 1982 and 1984, over 50 Time Compliance Technical Orders (T.C.T.O.) and over 100 factory modifications were issued pertaining to this problem.

The added insulation, increased tolerances, and better wire bundle clamping and restraining which these changes (TCTO's) have brought about have somewhat "alleviated" the problem.

III. Description of the Present Problem

The basic flaw in the F-16 which exists today is the packaging of the F-16 electric systems, all in the Right Hand Strake area.

The Aft Power panel, the Right Hand Strake DC Power panel, the Right Hand Strake AC power panel, the External power receptable, the battery cable, the battery bus, generator power feeder cables, AC Essential Bus #2, DC Essential Bus #2, DC Essential Bus #1, DC Converter #2, various distribution circuit breaker panels, and a multitude of wire bundles are crammed into the Right Hand

Strake area. The Right Hand Strake is compartmentalized into three zones in name only since each individual zone is adjacent to and unprotected from the adjoining zone. Transversing wire bundle cables are routed between these zones through the lightning holes. The type and variety of wire insulation utilized (CAPTAN) is vulnerable to wire bundle fire propagation. In essence, the design has created an electrical brain condensed in the Right Hand Strake area. The close packing of the wire bundles in this critical area of course magnify the already existing wire chafing problem in the aircraft.

As a result, wire bundle chafing or a major short could and probably would result in the potential for a Category I Hazard (resulting in loss of aircraft and/or loss of the pilot). A wire bundle fire in this area obviously could and probably would have catastrophic & lethal results! The Right Hand Strake area is also extremely vulnerable to shrapnel and groundfire. As pertaining to the survivability of the aircraft during combat, a single average hit by groundfire in the Right Hand Strake area could so affect the electrical system in this "electric jet" that the plane would be brought down. This is not proper design from a system safety redundancy standpoint or an aircraft survivability standpoint. This design principle has been well known for twenty-five years and I believe records will show that in at least two aircraft used in Vietnam it was necessary to retrofit changes in hydraulic line routing to flight controls since there was evidence that a single hostile hit could cripple multiple hydraulic systems and thereby deprive the aircraft of redundant flight control system safety.

At a minimum, proper design would require that the battery cable and battery bus (that provides electrical power in a total emergency A.C. electrical failure) should be physically moved to a separate area. Further, a study should be initiated to see how the other electrical systems could be separated, or protected. The three compartments, Aft Power, Right Hand D.C. and Right Hand A.C. Strake Areas' should be effectively separated as as to avoid wire bundle fire propagation possibilities.

This absolutely critical problem affecting the backbone of our Air Force exists today and endangers our pilots in peacetime and becomes even more critical during battle conditions.

IV. General Dynamics' Role Regarding the Problems in the F-16

The contract procurement system for our major military contractors fosters an environment in which flaws and defects in military equipment should be detected and appropriately corrected. In general, the manufacturer is required to establish a system safety group to design out flaws as early as possible by conducting studies and analysis to predict them.

The contractor, General Dynamics, has the duty to follow its product in the field and to remain the most knowledgeable about the design and performance of its product. The manufacturer is paid for this responsibility and is in the best position to initiate proposals of important improvements or safety retrofits.

Further, under the F-16 contract, General Dynamics has the duty to improve or correct his product through contractual provisions. Basically, this can be accomplished in one of two ways:

(1) A "Product" Improvement may be submitted to the government for approval in the form of an Engineering Change Proposal (E.C.P.). If this ECP is approved it will become a Technical Order and be installed through retrofit in the field. This "Product Improvement" should improve the existing product, including performance, capability, etc., and, accordingly, the cost is borne by the

taxpayer rather than by General Dynamics. Generally speaking, this process is slow moving and is generally listed as of little urgency since it only improves the product.

(2) A Notice of Deficiency or Notice of Defect (N.O.D.) is the proper procedure to be utilized by the contractor when the product is in violation of the contract or in violation of military specification. When a N.O.D. is issued, it is usually urgent, and safety of flight may be affected by the underlying problem. Unlike the "Product Improvement" procedure, this deficiency is corrected by General Dynamics under the cost provisions of the original contract.

In the case at hand, the military specifications require that the aircraft be designed in such a manner that wire bundle chafing shall not occur. However, as is demonstrated by numerous documents, this problem has been rampant in the F-16 aircraft. In addition to the documents admitted during the Harduvel trial, examples of this problem continue to appear. From the 338 chafing incidences previously referred to:

(1) An emergency incident where an F-16A was recovered after electrical chafing and a wire bundle fire occurred in the Right Hand Strake area. The fire continued even after aircraft shutdown and battery turnoff. Thirty or more wires had burnt and three out of four flight control channels had failed.

(2) An emergency incident where F-16 aircraft 81-0696 had a wire bundle fire in the Right Hand Strake area. Please note that this aircraft was only four serial numbers subsequent to the Harduvel aircraft.

(3) A document indicating that screws found in F-16 access door panels were oversized and in violation of General Dynamics' specifications and in violation of General Dynamics' control drawings.

(4) Numerous reports of wire chafing in the Right Hand Strake area. Much concern is expressed in the documents

concerning wire chafing at panels 2202, 2204, and 2206.

(5) An additional 200 pages of reported wire bundle chafing incidents throughout the aircraft.

The wire bundle chafing problem, which, in my opinion renders the F-16 in clear violation of military specification, should have been the subject of many Notice of Deficiency correction procedures, beginning at the first detection of this serious and widespread problem. Instead, the numerous attempts to remedy this situation apparently have been treated with "Product Improvements" TCTO's.

During my entire participation in this case, I have not seen one instance where General Dynamics has corrected or initiated modifications regarding any problem on the aircraft through the Notice of Deficiency Procedure. I have seen or heard of evidence of thousands of ECP's and TCTO's for this aircraft under the "Product Improvement" procedure, including all of the ones for wire bundle chafing. It is obvious why General Dynamics has been repairing the defects in the F-16 under the "Product Improvement" procedure, wherein the taxpayer bears the cost. Further, under the "Product Improvement" procedure, General Dynamics is the one who is paid to fix it. This is true despite the fact that many of these so-called "improvements" were to fix violations of Contract, military specification, military standards and/or good engineering practice.

These opinions are respectfully submitted by a trial lawyer and a citizen who believes that our military personnel deserve the best and most effective weapons system that technology can produce. When this most admirable goal is compromised by corporate profit seeking, and at the expense of the taxpayer, and results in risks to the lives of our best soldiers, it is time for attention and action.

The extent by which General Dynamics has profited at the expense of the taxpayer with respect to the attempted correction of F-16 aircraft problems and wire bundle chafing problems is not known, but it is a matter which certainly deserves investigation by our representatives in Congress.

Thank you for the privilege and honor of speaking with you.

Senator Proxmire. Thank you, Mr. Price.

I wish all three of you would submit the documents to which you have referred to us, if you would. We would appreciate that.

Mrs. Harduvel, you said in your statement that your husband told you that if he crashed that you should get a copy of the safety report and an attorney because it would not have been his fault.

Mrs. Harduvel. Yes, sir.

Senator Proxmire. Did he or his fellow pilots experience problems with the aircraft before his accident?

Mrs. Harduvel. Yes, sir.

Senator Proxmire. Did any of them involve electrical malfunctions?

Mrs. Harduvel. Yes, sir. The first guy killed in the F-16 was killed when his emergency power unit fired.

Senator Proxmire. When did that happen?

Mrs. Harduvel. I believe it was the end of July 1981.

Senator Proxmire. What was his name?

Mrs. Harduvel. His name was David Moats.

Senator Proxmire. How do you spell his last name?

Mrs. Harduvel. M-o-a-t-s. He was killed. He was flying—because you see at the time the aircraft was designed so that in the absence of electrical power the flight control surfaces go to rig neutral. In the F-16 rig neutral at the time pitched the nose down. That is the dumbest thing I ever heard of.

Senator Proxmire. Ted Harduvel, your husband, did he ever experience electrical malfunctions?

Mrs. Harduvel. Yes. He had had problems with the electrical system. He has written to me that there were rumors at the bar the night before that they were going to ground the F-16 because of the fuel pump, that he had taken an airplane up, picked up a brand new jet at the Ft. Worth factory, took it up. It had a brand new jet smell, everything, with the afterburner. He was keeping up with the guy in front of him.

Senator Proxmire. You say a brand new jet, a brand new F-16?

Mrs. Harduvel. The one he took to Korea on the 9th of March, he picked it off, took it off. He was keeping up with the guy that was in front of him. So he went to light the afterburner and the engine flamed out on a brand new jet. He was stuck in Las Vegas for 3 days. He said, all I could think about is 8,000 miles of ocean with an engine I don't trust.

Senator Proxmire. For the moment I wanted to get the electrical failures.

Was that an electrical failure?

Mrs. Harduvel. I am not sure if the engine was an electrical failure or what caused it to not light. I don't know. He had had problems with it. The airplane would have ride ups and it wouldn't be able to duplicate it on the ground.

He felt that if he studied hard and did his safety procedures and went through his emergency procedures he would be able to cope with whatever popped up.

But, yes, he had trepidations and expressed to me about it and flat out told me don't get the collateral board report, Janet, get the safety report.

Senator **Proxmire**. You say you did not get the safety report from the Air Force?

Mrs. **Harduvel**. No, sir, not officially.

Senator **Proxmire**. You got something. What did you get precisely?

You said a friend of yours was able to give you something.

Mrs. **Harduvel**. In a brown paper envelope I got what is called the message traffic.

Senator **Proxmire**. This was not the safety report?

Mrs. **Harduvel**. It was the encapsulated version of the safety report. It was from the safety report. It went through conclusions, through the 13 scenarios, what they thought was the conclusion of it.

Senator **Proxmire**. Apparently, your husband thought you would be able to get it by simply asking for it.

Mrs. **Harduvel**. No. He told me it was going to be very hard to do. I knew that it was. Oh, yes, the moment they knocked on my door at 1:30 in the morning and said, Mrs. Harduvel, we believe you are a widow, we are not sure. One of the guys said, Janet, is there anything I can do? And I said, yes, promise me you will get me a copy of the safety report. He said, you know, I can't do that. And I said, well, don't ask me if you can do anything for me then.

So it took me 2 months, but indeed it came. I had four friends who came in and told me that they would be court-martialed if I got any safety information.

A man flew in from Norton Safety Center in California to question where I got it from, and I looked at him and I said, you know what happened to my husband; will you tell me? He said, Mrs. Harduvel, we are not here to discuss this; we want to know where you got that report.

Senator **Proxmire**. There may be a good reason for that. We are going to ask the general when he appears as a witness why a widow couldn't get the safety report. We will ask him that.

Let me ask you this. You said in the spring of 1982 General Dynamics sent out a worldwide team to inspect every air base with F-16's and found there was a systemwide chafing problem at that time.

Mrs. **Harduvel**. Yes, sir.

Senator **Proxmire**. How do you know this? What other evidence is there to back up your allegation that General Dynamics knew your husband's plane was defective when it was delivered to the Air Force?

Mrs. **Harduvel**. First of all, we have what is called a PICO letter. We don't have the actual letter. They never released it, but it was referenced, saying that here are deviations and waivers. They were signed off.

We asked who generates a PICO letter. They said the contractor does. The contractor requests that an Air Force plane be accepted now with waivers on it.

When you asked if this was a fleetwide chafing problem, if you will look at some of these time compliance technical orders—this was an urgent action one—you will see it starts—the serial numbers are on there, and the first one is 780001. My husband's airplane was 810692.

When you ask is it just an isolated incident, this cites all of the different airplanes, this time compliance product improvement, like capping wires and stowing wires and making sure critical systems like your flight controls don't short out and not work, boy, I would say that is a product improvement.

Senator **Proxmire**. We have a copy of the video film made by General Dynamics to instruct maintenance workers about electrical wire chafing problems in the F-16. We will play a short portion of it. Then I would like you to explain the significance of it.

[Film shown.]

Senator **Proxmire**. This was made by General Dynamics?

Mrs. **Harduvel**. That is what it says, sir, produced by General Dynamics for the Air Force.

Senator **Proxmire**. Mrs. Harduvel and Mr. Acosta, would you each tell us briefly what significance do you think this film has?

Mrs. **Harduvel**. It sounds to me like the videotape speaks for itself. It was produced by General Dynamics, given to the Air Force so the Air Force maintenance guys could fix their mistakes, their design defects.

They say things like "common," "everybody knows," "minor," "inconsequential," all the way to "disastrous."

They used the word "lethal" in there, and there is one part which you didn't show, but it is a rather cavalier attitude, where they say—they are talking about the coaxial cables and that it could provide uncommanded inputs into the flying surfaces, providing some interesting moments for the pilot.

That is a rather cavalier attitude, sir. They are blatantly admitting that there is a wiring problem. I cannot believe they would make a videotape like this, 12 minutes and 19 seconds long, for one or two isolated incidents. Of course, another commonplace chafing problem.

It seems to me, sir, that it speaks for itself. There is a real problem with this F-16. I don't think it is limited just to 0692, and I am one of the opinion my husband is not the only guy that died due to an electrical malfunction in the electric jet.

Senator **Proxmire**. Thank you, Mrs. Harduvel.

Mr. Acosta.

Mr. **Acosta**. Senator, I think I just have one thing to add to that. That is General Dynamics was clearly asking the Air Force for help. It was asking the Air Force to fix something that it knew was broken. I just wonder who was paying for that.

Every time an Air Force man has to fix one of those things it costs the Government money. I think General Dynamics should have paid for it. It is clearly an admission that there was a defect in the jet.

Senator **Proxmire**. Mr. Acosta, will you discuss the evidence that General Dynamics knowingly delivered a defective F-16 that later killed Captain Harduvel? Can you summarize the evidence that electrical malfunctions were the cause of the crash?

Mr. **Acosta**. Yes, sir.

Captain Harduvel's aircraft rolled off the assembly line in the summer of 1982. Shortly after his was delivered to the Air Force, an inspection was conducted on the assembly line, and in the seven aircraft that they inspected they found that there were screws which were the wrong length protruding into wire bundles and harnesses in this area where the buses distribute power to the instruments.

They didn't do anything to fix Captain Harduvel's airplane. What they decided to do was to have a 100-hour inspection for something that was later determined to be highly crucial.

So I think that is pretty strong evidence that there was a manufacturing defect. I don't think that they designed the airplane to have the wrong size screws in it. That is why we won on the issue of manufacturing defect, I think.

There were other points as well. There were other problems, things that were the wrong size, in certain clamps, and so forth.

The evidence of an electrical malfunction is an inference that can clearly be drawn because the instruments weren't working and they are all electric, and it was stipulated at the trial that these instruments didn't have any internal defects; that is, they weren't defective themselves.

So the only possible way that they could have been not working was electrical problems in the jet. We found—we traced the wiring, we traced the power sources and all that. It is all in the same area where all these electrical distribution buses are put together in one spot. It is called the right-strake area. And that is what it was.

Senator PROXMIRE. Mr. Price, Mr. Acosta says that he believes that there have been many F-16's lost as a result of wire chafing. What evidence is there to support that conclusion?

And I would like Mr. Acosta also to respond to that question.

Mr. PRICE. Well, Senator, we tried to find out exactly that during the course of the trial and have not been able to come up with any definite answer. I believe that there is a total number of F-16's crashes. They total 75 or 80, or some figure in that range. Exactly how many of these were due to electrical wire bundle chafing, we know there is one for sure, the Harduvel accident, and that is one too many, but as far as finding out how many of the others were actual wire bundle chafing incidents we were not able to get that information from General Dynamics. Maybe you can.

Senator PROXMIRE. Is that because the safety reports were classified?

Mr. PRICE. Well, the actual conclusions, the final reports are classified, yes, and so we did not have access to them, and we were not able to get the correct information from General Dynamics during the trial. During one of the depositions in the trial, I believe that one of the General Dynamics representatives said that possibly 20 mishaps——

Senator PROXMIRE. Mr. Price, let me interrupt. What reason is there for them to classify that?

I am going to ask General Monahan that, too, but I would like you to give your best judgment on why that safety report is classified.

Mr. PRICE. Well, Senator, I believe it is classified because of—protection maybe for national security could possibly be a reason.

Senator PROXMIRE. How does that protect national security?

Mr. PRICE. Perhaps there is something very wrong with one of our pieces of military equipment that we don't want other countries to know definitely about how vulnerable we may very well be. That could be one of the possible reasons.

Senator PROXMIRE. Do you think that is a good reason?

Mr. PRICE. I don't know.

Senator PROXMIRE. Mr. Acosta.

Mr. ACOSTA. Senator, I think aside from national security considerations that the actual accident report ought to be made available to people that have legitimate reasons to look at it.

Senator PROXMIRE. Why wouldn't the publication of the accident report mean a much quicker, surer action to correct what is wrong? Isn't that logical?

If you keep it secret, it seems to me—and this is an example. Year after year they haven't acted on this.

Mr. ACOSTA. Yes, sir. The full accident report is probably 2 or 3 feet high.

Senator PROXMIRE. It would help us a lot more than it would help the Soviet Union to know about this, it seems to me.

Mr. ACOSTA. I don't think that there was anything of a national security nature in this particular accident, in most of them.

I was going to respond briefly to the last question you raised.

One of the General Dynamics vice presidents testified that there were very, very many electrical-caused crashes.

Senator PROXMIRE. I want to ask Mr. Kaufman, the committee counsel, to follow up on that.

Mr. KAUFMAN. Mr. Acosta, would you elaborate on the point you just made, that one of the witnesses at the trial said there were very many other accidents caused by electrical problems?

Also, is there any other evidence in the record or to your knowledge that supports your statement that many other accidents were caused by electrical malfunctions?

Mr. ACOSTA. Well, during the trial a man named F.A. Curtis testified. He is vice president of programs for General Dynamics, and he was in charge of the F-16 program, as I understand it.

He was asked how many F-16 crashes were the result of electrical malfunctions, and all he could say was that there were very, very many. He used two "very's" in his statement. So I take that to mean a lot.

We asked another witness, their crash investigator, a man named F.E. Lively, how many there were. We said, are there 20? He said it is possible.

One of the problems we found was that nobody seemed to have all the information we needed. When we took depositions of General Dynamics personnel, their experts, their engineers, they seemed to be very compartmentalized. The right hand didn't seem to know what the left hand was doing.

We got lot of "I don't know's." I don't know, I don't know, I don't know.

We know that there were a lot of crashes, and we know that out of 75 they had categorized them into various things, and there was about 20 or 25 that they don't explain very well.

I talked to a man that was involved in the initial design of the F-16. I think his name was Pierre Sprague. He told me there have been so many crashes that I cannot statistically attribute them to pilot error as has done General Dynamics.

So I think that that, combined with all the evidence of this fleetwide problem and all these wire chafing incidents that have occurred and can manifest themselves in many different ways, that is something that is difficult to comprehend. Wire chafing in one situation may cause an engine to fail. In another situation it may cause the flight controls to fail. In another situation it may cause the cockpit lights to go out while the pilot is in the clouds low over the ground at night.

There was a crash that occurred 7 days before ours which we think occurred as the result of the cockpit lighting failing.

So we think that there is quite a bit of evidence that can provide a strong inference that there are many crashes.

Mr. PRICE. May I follow up on that just briefly?

The best answer we could get, the most specific answer we could get was there's possibly 20 of these accidents, or 20 accidents or mishaps, due to electrical problems, but we can't determine what the nature of the problem was. That is as specific as we could determine in this particular lawsuit, the discovery in this particular lawsuit.

Senator PROXMIRE. Mr. Acosta, you say that General Dynamics participated in the investigation of the Harduvel accident, and you indicate that due in part to General Dynamics' role the Air Force was misled as to the cause of the accident.

Now, explain General Dynamics' role in misleading the Air Force about the cause of the crash and why you seem to believe it is improper for the contractor to be so involved in the accident investigation itself.

Mr. ACOSTA. First of all, I don't think it is improper for the contractor to be highly involved because he certainly knows more about the airplane than anybody else. There were over 300 contractor designers and engineers to every one Air Force guy trying to keep track of it.

But what I think is that once the contractor becomes involved in the investigation and you are investigating a crucial part where you think that that might be related in a significant way, there should be some outside verification of the findings, and what we found in our particular case is that really there wasn't any.

In fact, during our trial the contractor that did the investigation came in and he attempted to rehabilitate the defense on this gyro situation, and we had already put on plenty of evidence to show what the defect was or that it wasn't operating, and even that expert—it was Singer Kurfitz, the company that was involved. Single Kurfitz' gyro man said he could not explain the discrepancy between the gimbals. He said in his opinion it was possible that there was an electrical malfunction again.

Senator PROXMIRE. Mrs. Harduvel, you referred to an accident at Hill Air Force Base this morning in which an F-16 had a fire in the right-strake area. Tell us more about this. Where is Hill?

Mrs. HARDUVEL. Hill Air Force Base is the air base where that videotape was filmed. It was the first air base in the United States to get operational F-16's in 1979.

What I am referring to is a friend of mine, who is a pilot, called me after he heard the story of the trial—and even testified on our behalf—and he said it is still going on, Jan, there was a fire in an

F-16 this summer. I talked to him in September. So I presumed it was July or August. He said the airplane landed and the fire was so bad in the right-hand strake panel that it burned through the outer skin of the aircraft.

This is not 2 months after Fairchild and General Dynamics denied that there was any kind of problem like that. They are finding out now that capped on wiring, which is the wiring insulation in the F-16, when you crack it goes ahead and catches on fire and sustains the fire.

The Navy is doing some very serious studies on it now. This is what is in this F-16. It goes on, but they obscured the truth.

Senator **Proxmire**. Mr. Price, Mr. Acosta, I want to thank you very much for your excellent testimony.

Mrs. Harduvel, I know this is very difficult for you. I think you have done a superb job. We are very grateful to you.

Mrs. **Harduvel**. I would like to say thank you very much because for 5 years I have felt that we were never going to be able to fix the F-16. I really am a patroit. I really want to see us do real well, and I do have to say when the F-16 does work it is the greatest fighter on the face of the earth, but you have to preface that with when it does work, and I want to see it work all the time.

Senator **Proxmire**. Thank you. Will you stand by while the next few witnesses testify?

Our final two witnesses this morning are Lt. Gen. George Monahan, Jr., and Mr. Ernest Fitzgerald.

As I said in my opening statement—I will repeat it—General Monahan is the Military Deputy for Acquisition in the Office of the Assistant Secretary of the Air Force. He is the top Air Force official in the area of procurement.

Mr. Fitzgerald is the Management Systems Deputy in the Office of the Comptroller of the Air Force, responsible for devising and putting into effect good management controls for the purchase of weapons.

General Monahan, we are grateful to you for coming before us. You have quite an act to follow. You go right ahead, sir.

STATEMENT OF LT. GEN. GEORGE L. MONAHAN, JR., MILITARY DEPUTY FOR ACQUISITION, OFFICE OF THE ASSISTANT SECRETARY OF THE AIR FORCE

General **Monahan**. Good morning, Mr. Chairman.

First of all, let me say that I have been in the Air Force 32 years. I have a wife and five kids, a lot of flying time, and my heart really goes out to Mrs. Harduvel. She and all Air Force wives are probably the noblest people that I know. They lead very demanding lives. They have to be people of great character and great integrity, and as I said, my heart definitely goes out to her, and I very much appreciate, having attended many, many missing man formations over the last 32 years, that it would be very hard for her to go through what she is going through.

Senator **Proxmire**. She was high in her compliments of the Air Force and the officers that she talked about. She had some trouble with General Dynamics, but not the Air Force.

General **Monahan**. Well, Mr. Chairman, I do have a prepared statement for the record, and I am going to submit that.

Senator **Proxmire**. Will you summarize, then, in 10 minutes?

General **Monahan**. Yes, I can summarize, and I have some charts to assist.

I noted that you were interested in talking about the industrial modernization improvement program, talking about the cost of the F-16, and finally about the safety aspects. So my statement and my remarks are oriented toward that.

The chart over here just shows some of the program highlights.

As you perhaps know, it began way back in 1972. The first production airplanes came out in 1978, and since then we have delivered about 1,900 airplanes, about 1,100 of those in the U.S. Air Force and 10 other air forces throughout the world.

We have been fortunate in having a very good cost track on the program. It has been about $2 billion under budget. That is even not considering savings due to industrial modernization or savings that are due to multiyear contracts.

The program has always been on or ahead of schedule ever since the first deliveries in 1978. The airplane meets very, very demanding performance requirements. It was the first airplane to be able to pull nine G's, nine times a person's weight, and sustain that.

That kind of performance, coupled with its ability to accelerate, with very, very good endurance, has held it in good stead as well as its excellent accuracy in weapons delivery situations.

We have been very pleased with the performance of the airplane. The airplane has always been very, very reliable and very maintainable. It has exceeded all of our goals in that respect, and as a result it has been the safest single engine fighter that we have ever had in the history of the U.S. Air Force.

Let me just talk a little bit about the cost record because you were interested in that.

You recall the early airplanes, the A and B model airplanes, you can see what the cost track was there on those. Those aircraft were derived from the original fighter prototypes in the mid-1970's. They were primarily an air-to-air aircraft designed for visual conditions.

Because the program was very successful, when we came upon the need to replace our aging F-4's and the need to meet an emerging threat posed by a new Soviet aircraft, we decided to exploit the success of the F-16 A and B program and go to the C and the D model airplane.

The C and the D model airplane have now put in capabilities so they can be operated at night and they can operate in all weather conditions. We went to an air-to-ground mission more than we had in the past.

The A's and the B's were very good aircraft and finally gave it beyond visual range capability and enhanced electronic warfare capability.

That has been the record, and the chart up there shows a number of aircraft that have been under contract through fiscal year 1987.

The excellent cost record can be attributed to about four major items:

First, the use of multiyear contracting, which Congress approved on our behalf; the excellent industrial modernization program—we will get into that later if there are questions; the program we call component breakout, which the Government furnishes a lot of major components to the airplane—to General Dynamics to put in an airplane; and, finally, subcontract competition, in which we have General Dynamics subcontract as much as possible or compete as much as possible, everything that works.

Finally, another major factor has been the effort on the part of the Congress to assure stable funding for this program. Funding has been very stable, and that is one of the major reasons for being able to have this excellent cost record.

Finally, let me just talk about the safety record of the airplane. I have it here compared with other single engine fighters that have been in the U.S. Air Force inventory.

As you can see, the F-16 has been our safest airplane, and by comparison with the rest of those, which are mainly air-to-air aircraft, the F-16, with its substantial air-to-ground mission, the very high performance, and the ability to pull nine G's, we think that that safety record is indeed excellent.

As a matter of fact, for the fiscal year 1987 the rate was 3.4, even lower than the 5.9. There are many reasons for that. High among them are the excellent training and the very high quality of our air crews and our ground crews and excellent quality control program. You don't get good, reliable hardware unless there is a good quality control program for the airplanes that were included.

The reliability of the airplane was originally projected to be 3 hour between major maintenance actions, and indeed the aircraft goes about 5 hours between any major maintenance—let me correct that. The meantime between any maintenance actions is 5 hours versus 3 hours in the plan. The maintenance man-hours for every flying hour are about one-half of those which were originally planned, down to about 10 versus 20.

The mission capability range; that is, the number of aircraft, percentage of aircraft that are available to fly at any one given particular time is over 90 percent. Indeed, we never thought we would get anywhere near that kind of performance out of the airplane, and no other aircraft we have ever had is able to do that.

So in summary, I guess I have to say that the airplane has met or exceeded all our requirements and costs and schedules on reliability and performance. Congressional assistance has been very, very important in that regard.

One final note, Mr. Chairman, you asked for the industrial modernization improvement program. We are going to get into those.

With that, I will conclude.

[The prepared statement of General Monahan follows:]

PREPARED STATEMENT OF LT. GEN. GEORGE L. MONAHAN, JR.

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE

I appreciate the opportunity to appear before this committee to testify on the Air Force F-16 aircraft program. In this statement I will present data that I believe represents true measures of operational success--reliability, maintainability, mission capability rate, and mishap (accident) rate. Additionally, I will comment on the F-16 cost record and the impact of the F-16 industrial modernization program.

The F-16 reliability as measured by the Air Force Maintenance Data Collection System (D056) in terms of mean-time-between-maintenance-actions (MTBMA) is presented in Figure 1. The success of the program is clearly demonstrated, for example, by the achieved MTBMA of the F-16C of greater than 5 hours versus a goal of 3 hours.

Figure 2 shows a similar result in the case of maintainability. The goal was to maintain the aircraft using 20.5 manhours per aircraft flying hour. We are currently keeping the F-16C repaired using only about half that quantity of manpower.

A more encompassing measure of operational success is the mission capability (MC) rate. This measure reflects the percentage of the fleet that is in commission and ready for performing combat missions at any point in time. Achieving a high MC rate depends not only upon achieving high reliability and maintainability, but also upon establishing the necessary logistical support to assure timely availability of spare parts, test equipment, proper repair procedures, and the like. The Tactical Air Command has established an MC rate of 85% as the standard for the F-16C/D. Figure 3 shows that the actual MC rate has not only exceeded this standard for the past year, but has been over 90% for most of the period.

Figure 4 depicts the F-16 safety record in comparison to other single engine Air Force jet powered fighter/attack aircraft. The data presented represents the cumulative major accident rate per 100,000 flying hours as a function of the total flying hours experienced with each type aircraft and shows that the F-16 is the safest of all.

The cost record of the F-16 mirrors the operational success of the aircraft. As can be seen from figure 5, F-16 costs have been less than budgeted.

The original F-16 A/B had an excellent cost record. The Air Force decided to exploit that success by developing the F-16C/D version, rather than develop a new aircraft to meet emerging threats and replace the aging F-4s in the air-to-ground role. Improved avionics including a Programmable Signal Processor (PSP), APG-68 radar, expanded memory computers, and wide angle head-up display were introduced. Increased durability engines

F-16 RELIABILITY

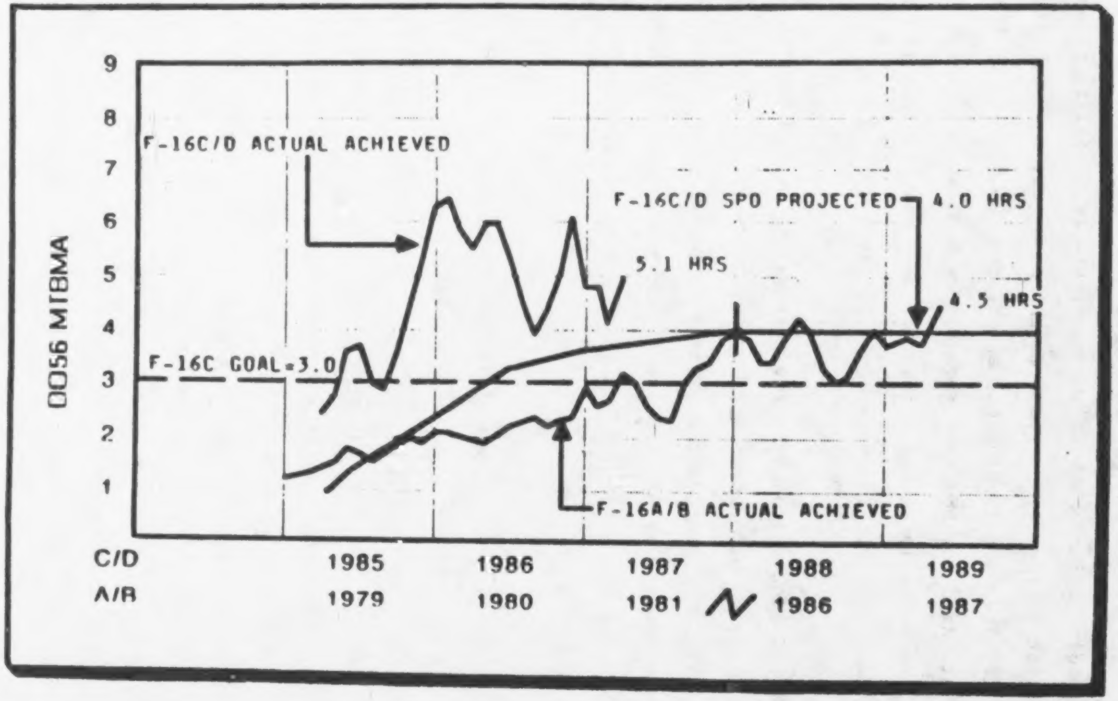


FIGURE 1

F-16 MAINTAINABILITY

TOTAL MAINTENANCE MANHOURS PER FLYING HOUR

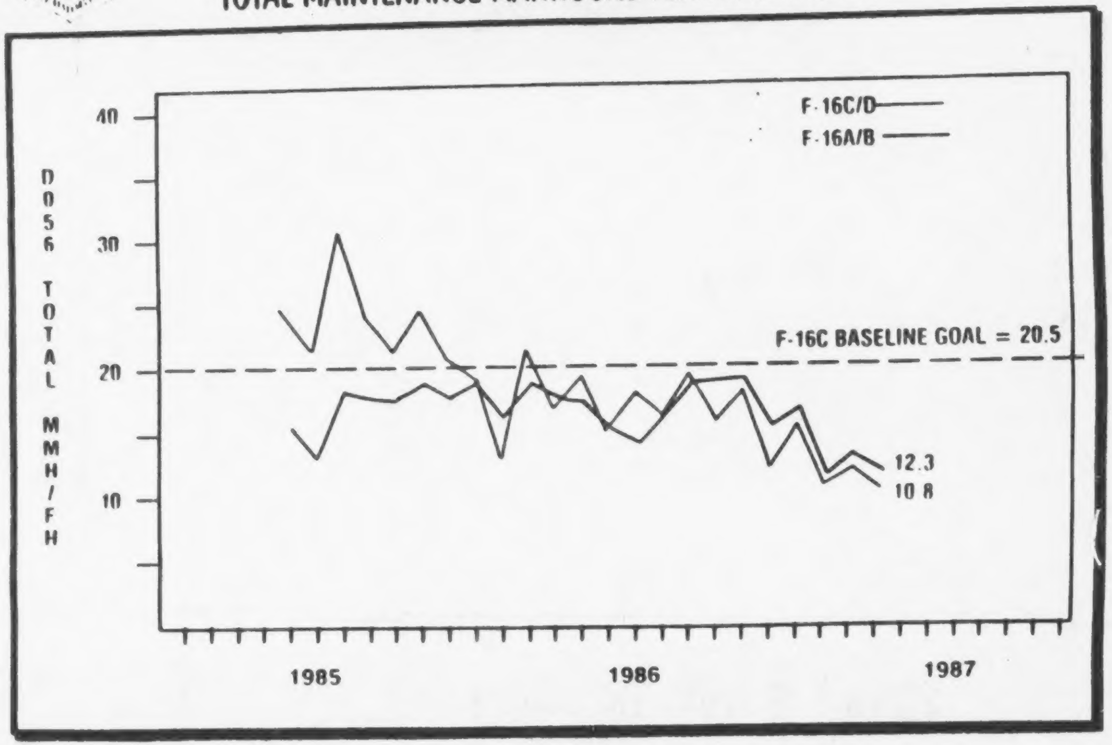
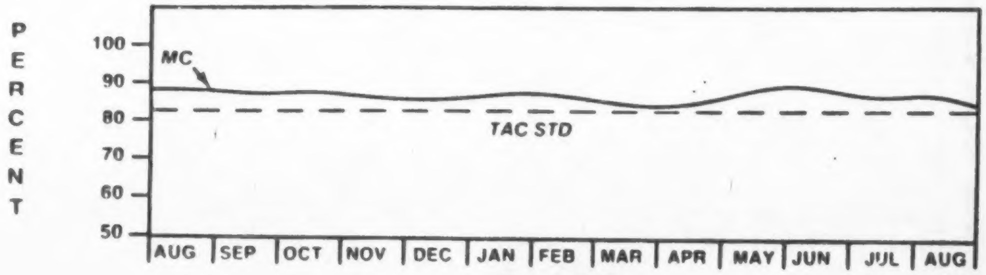
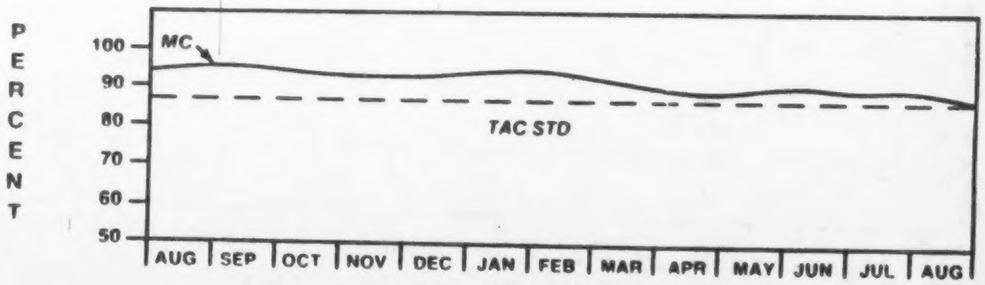


FIGURE 2

F-16 MISSION CAPABILITY RATES



F-16 A/B



F-16 C/D

FIGURE 3

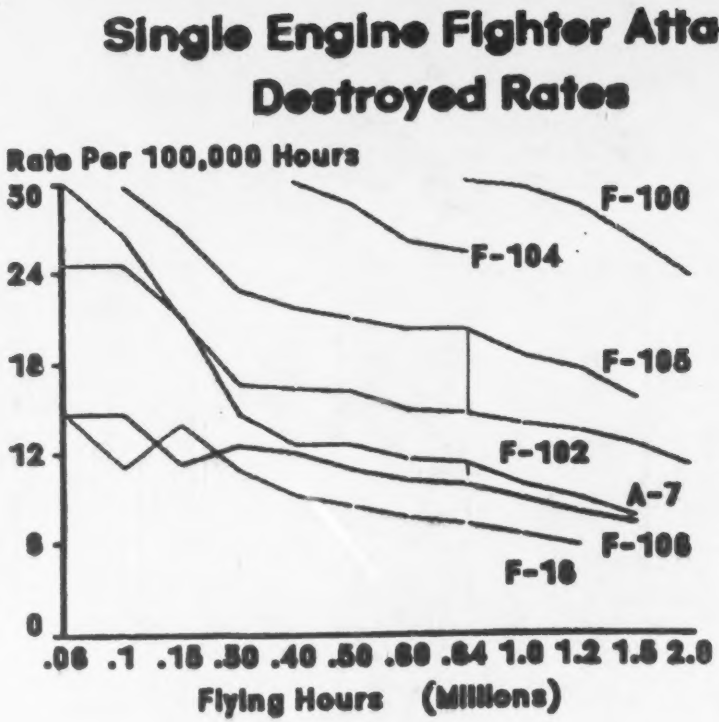
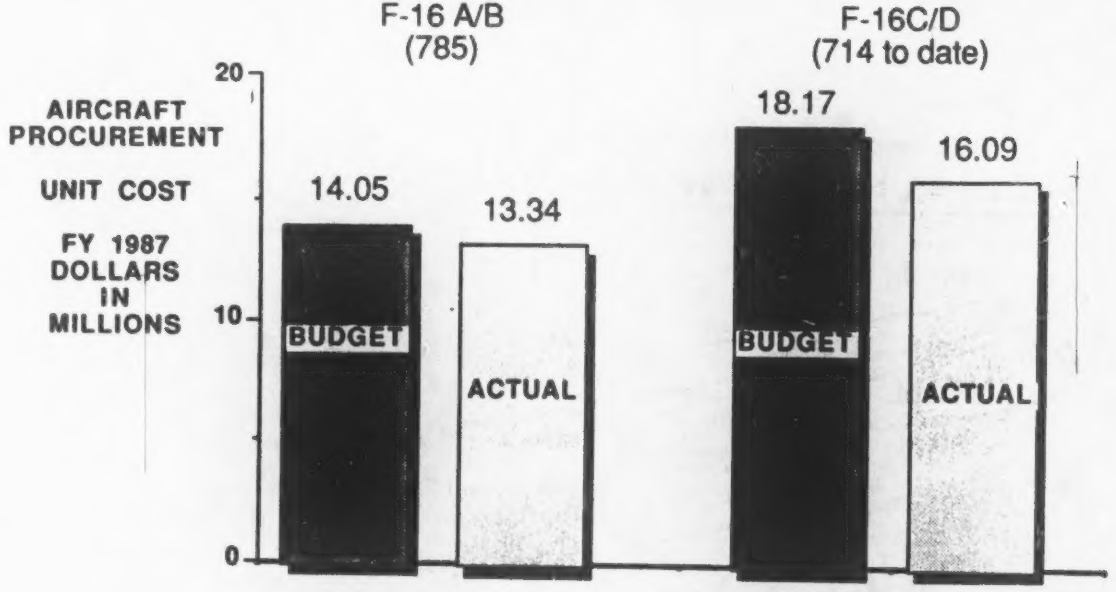

Single Engine Fighter Attack
Destroyed Rates
Rate Per 100,000 Hours
30
24
18
12
8
0
.06
.1
.15
.30
.40
.50
.60
.84
1.0
1.2
1.5
2.0
Flying Hours (Millions)
F-100
F-104
F-105
F-102
A-7
F-106
F-16

FIGURE 4

F-16 COST RECORD



- DAY, VISUAL
- PRIMARY AIR-TO-AIR

- NIGHT, ALL-WEATHER
- PRIMARY AIR-TO-GROUND
- BEYOND VISUAL RANGE AIR-TO-AIR
- ENHANCED EW CAPABILITY

Figure 5

have been incorporated in over 150 F-16 C/Ds, and an even more capable increased performance tactical aircraft engine is planned for incorporation during the FY 90 aircraft procurement program.

Component breakout, technology modernization, subcontract competition, and multiyear procurement have been utilized to reduce costs. In addition, all F-16 aircraft delivered to date have been delivered on or ahead of schedule; that's 9 years of consecutive on schedule performance!

As mentioned above, technology modernization, or more formally, the Industrial Modernization Incentives Program (IMIP) has been one of the means we have used to reduce the cost of the F-16 Program.

Technology Modernization and the requirement for manufacturing excellence were part of the original F-16 program. In an era of sophisticated weaponry, where combat capability is contingent on new metals, composites, and highly advanced systems, a need exists for precision manufacturing. The F-16 program has taken defense contractors from 1940s-type manufacturing processes to high technology manufacturing that can be used well-into the future to ensure high quality weapon systems at reduced cost.

So far, the F-16 IMIP has induced capital investments of $250 million by General Dynamics and $270 million by subcontractors in 12 states. This improved manufacturing technology helped to reduce direct manhours to produce the F-16 from over 80,000 to only 45,000--despite significant changes in the aircraft configuration! Even though over 1,900 aircraft have been produced, we are still seeing dramatic improvements in learning efficiency.

Negotiated net cost savings realized thus far are in excess of $320.1 million; moreover, additional savings projected through the current contract will exceed $429 million. These savings are reflected in the President's Budget.

Significantly, the F-16 IMIP has developed 108 new manufacturing technologies which have been disseminated to the U.S. aerospace industry. These include state-of-the-art advances in composites, electronics, robotics, lasers, sheet metal machining, and low-observable technology.

In summary, the F-16 has met all performance requirements and has been more reliable and safer than anticipated. The program has been substantially under budget because of the tried and true techniques of component breakout, subcontract competition, multi-year contracts, industrial modernization and stability of program funding. These measures are the result of cooperative efforts between the Congress and the Air Force. Of greatest impact has been the Congressional approval of multiyear contracts, and funding levels that have kept production rates at efficient levels. Congressional approval of industrial modernization has also played an important role. Finally, the F-16, with all its combat capability, remains the safest single engine fighter in American history.

Senator PROXMIRE. Mr. Fitzgerald, please proceed.

STATEMENT OF A. ERNEST FITZGERALD, MANAGEMENT SYSTEMS DEPUTY, OFFICE OF THE COMPTROLLER OF THE AIR FORCE

Mr. FITZGERALD. Senator, I do not have a prepared statement.

As you noted in your opening remarks, I accompanied the committee general counsel, Mr. Kaufman, on a visit to the General Dynamics plant in Ft. Worth and jointly prepared with him a trip report which I would like to submit for the record.

Senator PROXMIRE. Without objection, that will be printed in the record in full.

[The trip report follows:]

2 October 1987

VISIT TO GENERAL DYNAMICS, FORT WORTH, TEXAS - 23-24 SEP 1987

On arrival at General Dynamics, Sept 23, 1987, we met with the Air Force Plant Representative (AFPR), Colonel Riggs, Captain Rick Hansen (F-16 SPO), and Major Wicker, an Asst to Colonel Riggs. Mr. Kaufman recalled that at the Air Force briefing on the F-16 program conducted by Capt Hansen at the Pentagon, Sept 18, 1987, Capt Hansen had suggested Mr. Kaufman visit the GD plant in Fort Worth to obtain first-hand information. Mr. Kaufman explained to Col Riggs and Capt Hansen that he wanted to discuss the electrical system and wire chafing problems as well as the Industrial Modernization Improvement Program (IMIP) and the ManTech program.

We first tried to determine the degree of involvement of the AFPRO quality control people in actually inspecting the F-16 product. Col Riggs said that 85 of his approximately 250 people were in quality assurance and another 22 were in engineering. He added there were approximately 400 people in the SPO. Col Riggs said that there were certain mandatory government inspection points where his people were required to perform quality inspections and that they did other product inspections as they had time. But, he said, in large part we are just inspecting the contractor's inspectors and the contractor's inspection systems. In order to determine just how many people the contractor had in his quality assurance operation, we asked for and were given a copy of the GD Sept 21, 1987, division personnel reports. This report showed that GD has 1686 people in its Fort Worth quality assurance organization. (Total GD employment at the Fort Worth facility is 25,255, of whom 6,704 are in the research and engineering department).

We asked if anyone in the AFPRO received Air Force accident reports involving F-16 aircraft. Col Riggs said they did not. He saw no need for the accident reports because the Air Force would tell him what he needed to know about any accident. We asked Col Riggs if he knew how many F-16s had been destroyed in accidents. He said he did not know but would find out (later he told us there had been 66 aircraft destroyed). We asked if he knew how many fatalities had occurred in F-16 aircraft. Col Riggs said he did not know. We asked if he knew whether any accidents were attributed to wire chafing or wire harness chafing. Col Riggs replied that he had been told by the System Program Office (SPO) that no accidents were attributed to problems with the wire harnesses. When asked whether that statement included all sources of chafing, Col Riggs replied he did not know. However, he acknowledged that "we still have some chafing problems." Col Riggs then mentioned that GD had established an Electrical Harness Corrective Action Team. We asked who in the Air Force monitors the team. Col Riggs said he would find out and let us know. (The information was not provided during the visit).

At that point he said he had read in the newspaper that the Air Force had reopened its investigation of the 1982 F-16 accident which killed Capt Harduvel, and that the accident board was reconvening at the end of this month. He added that concerning the recent trial in Federal District Court in Tampa, FL., in which it was determined that GD was liable for civil damages as a result of the Harduvel accident because of manufacturing and design deficiencies involving the elecrical systems and harnesses, that the jury may have been wrong. He also stated that any electrical wiring problems have been fixed. Mr. Kaufman asked Col Riggs what evidence he had of chafing problems. He could not answer and said he would have to talk to his quality people -- Bill Gwaltney and Al Aherns. Col Riggs was asked whether the F-16 wire chafing problems were comparable, worse, or less than in other fighter aircraft. He said he did not know and added that the term "wire chafing" was used any time a wire in an aircraft touches metal it is not supposed to touch. Col Riggs was asked if he knew whether any military standards for specifications governed wire chafing. He replied that he did not know. Mr. Fitzgerald at this point asked if MIL-STD 9858A and 1520 and the military specification for wiring, MIL W 5088, were on contract. Col Riggs thought that both 9858A and 1520 were on contract but he did not know about 5088.

After requesting that Col Riggs' quality control experts and someone from engineering be invited to the meeting, we left for a brief plant tour with Mr. Roy Knepper, Director, Plant Services. We first went through the wire harness area where wires were being prepared and assembled by hand into harnesses. From there we went to the assembly line to see the F-16s in various stages. At one particular stage, we were able to examine the right strake area of an F-16 fuselage. The electrical distribution buses circuit breakers are located in this area. Technicians responded to questions about the electrical wires and buses and explained some of the precautions and modifications made to correct previous problems and to prevent chafing.

We went from the assembly line to Col Riggs' office to resume discussions. Present at this meeting, in addition to Col Riggs and his assistant, Major Wickers, were Mr. Cire from AFPRO quality assurance and Mr. Davis from AFPRO engineering. We noticed that, in contrast to the guarded attitude of Col Riggs and the somewhat tense atmosphere of the earlier meeting with him, there was a more relaxed attitude on the part of Mr. Cire who, for the most part, was responsive and helpful at this meeting.

Mr. Cire told us that his office received Material Deficiency Reports (MDRs) and Service Reports (SRs), collectively referred to as deficiency reports, from the SPO. He said that they also received some GD Field Service Reports "as a courtesy" from GD. He explained that these reports prepared by GD technical representatives in the field were supplied to the AFPRO as GD saw fit. Mr. Kaufman showed the AFPRO people some of the GD field service reports he had indicating chafing problems. Mr. Cire said that the term "chafing condition", appearing in the field service reports, indicated a potentially bad problem, and that the term "damaged by chafing", appearing in another field service report, indicated the existence of a serious problem. He said that when such potential or actual problems are brought to his attention, he makes sure they are fixed.

Mr. Cire went on to explain that the AFPRO's mandatory Inspection Check List was built up from "recurring defects" that were noted. When asked how they detected "recurring defects" without any records or systematic data reduction, Mr. Cire explained that GD arrayed the data, but was vague on whether or not the GD data arrays were the basis for the "recurring defect" determination by the AFPRO. We asked for a copy of the GD report which would show recurring defects. (The information was not provided during the visit).

Mr. Cire said he did not recall ever receiving a Notice of Deficiency (NOD) from the SPO on wire chafing. He also did not recall that any Engineering Change Proposals (ECPs) to correct wire chafing had ever been put on contract. Mr. Cire said that F-16 production has been suspended on a number of occasions at his insistence. He could not recall if chafing was the cause of any of the suspensions. (At this point, Mr. Cire began to grow increasingly vague in his recollections and answers).

Mr. Cire was asked if he had knowledge of the Air Force actions to fix F-16 problems, known as "Falcon Rallies". He recalled a "work package" dealing with the so-called "Falcon Rallies", one of which he had been told dealt with the F-16 wire chafing problem. But he said he was unable to discuss the Falcon Rallie other than to say they were done under ECPs away from the GD facility.

In an effort to find out what had been done contractually, we asked that the Principal Administrative Contracting Officer (PACO) be invited to the meeting and bring with him contractual change orders for the past year. The PACO, J. Moyes, joined us and produced 7 pages of change orders in varying states of definitization. Mr. Moyes said he did not know what work was involved in any of the contract change orders.

Mr. Moyes was asked if he could segregate contract change orders to identify those which dealt with wire chafing. He said that he could not at that time, but that it was possible and that he would have it done. (The information was not provided during the visit).

Mr. Fitzgerald then asked Mr. Moyes to explain four of the numerous August 1987 proposed changes which appeared on the document given to us to amount to more than one billion dollars. Mr. Moyes was unable to explain them but agreed to furnish an explanation the next day.

Mr. Cire confirmed that the wiring specification, MIL W 5088, was on contract but had been "tailored". Among other things, Mr. Cire said that the 3/8" required clearance between any wires and metal was eliminated. We asked for a copy of the tailored specification. (The information was not provided during the visit).

There was a discussion of the practice of issuing waivers and deviations with respect to quality or engineering requirements. Mr. Cire said that the issuance of waivers or deviations was a standard practice in all Air Force aircraft programs and had been used with respect to all F-16s. Waivers and deviations were submitted by GD to the AFPRO and approved by Air Force contracting officers. As a consequence, the contractor was not required to meet those requirements specified in the waiver or deviation.

Mr. Davis and Mr. Cire were asked about the fact that the electrical distribution buses were concentrated in adjacent areas, in the right strake area of the F-16s. Mr. Davis replied that concentrating the buses provided some additional maintainability and some "little" (he emphasized the word "little") extra space. He acknowledged that the trade-off was some increased vulnerability of the aircraft to damage in the right strake area; that some of the value of redundant systems, such as in flight controls, is lost when harnesses for the redundant systems are brought together.

Mr. Kaufman asked whether anyone present knew if the electrical distribution buses and circuit breakers were as concentrated in other aircraft as they are in the F-16. Mr. Davis and Mr. Cire said they were unable to recall. (The next day, during the plant tour, we observed several F-111 aircraft under repair. We stopped to examine one of the aircraft and were able to observe that the electrical distribution buses and circuit breakers were considerably more disbursed in areas of the fuselage than in the F-16).

Mr. Cire was asked how much actual testing and inspection of the F-16 were conducted by the AFPRO people. He replied, none "but we witness a lot". He explained that most of the testing and inspections were performed by GD employees. He added that the AFPRO quality assurance people do some mandatory inspections. He said that 50-60 AFPRO employees were involved in testing and inspections.

Mr. Cire was asked whether he had seen a video film prepared by GD for the purpose of alerting F-16 maintenance people about the wire chafing problem. He said he vaguely recalled such a video, but that he himself had never seen it. He believed there was such a video in 1982 or 1983 and that it may have been made into a Technical Order (TO).

We then had a discussion with Mr. Cire about Air Force accident reports in general. Mr. Cire seemed to recall that these reports had not generally been considered classified information prior to about five years ago. In response to a question as to whether there were now two versions of the accident reports, one of which is unclassified, and one classified secret, Mr. Cire said that his understanding was that the reports were in two parts. Part A, he said, contains the "facts" and is released, but Part B is secret and subject to "Executive Privilege" because it contains conclusions. Mr. Cire reiterated that the AFPRO did not get accident reports and he doubted that the contractor did. There followed a discussion of the need for full and timely feed-back of all field quality and performance information, including accident reports, to both the AFPRO and the contractor.

It was agreed that the next day's visit would begin with a tour of some of the IMIP activities in the plant. Col Riggs promised to gather the material we requested and we reiterated our request to Capt Hansen for the before-and-after bills of labor and material for the projects on the ManTech and TechMod charts given to us. (The information was not provided during the visit).

We returned to Col Riggs' office the next morning, Sept 24, 1987. Major Wickers immediately asked Mr. Fitzgerald to return the documents that he had been given the previous day so that they could be mailed to him "through channels". Mr. Fitzgerald protested that such a procedure often resulted in the material taking weeks or even months to arrive at the Pentagon and that sometimes it never arrived. He refused to return the material. Major Wickers demand was backed-up by Col Riggs. When challenged as to their authority for such a demand, the officers produced Air Force regulations dealing with providing information to Congress. Mr. Fitzgerald pointed out that he was neither a member of Congress nor a Congressional staffer, Col Riggs argued that his instructions were that Mr. Fitzgerald was travelling as a Congressional staffer and was to be treated as such, but could produce no documentation to substantiate this assertion. Mr. Fitzgerald noted that the agenda for the visit, prepared on Col Riggs' own AFPRO letterhead, listed the visitors as:

> MR. RICHARD KAUFMAN, GENERAL COUNSEL OF JEC, SAF (sic), AND
> MR. ERNEST FITZGERALD, MANAGEMENNT SYSTEMS DEPUTY, SAF

Col Riggs' letterhead agenda was in accordance with the official message which his own office had noted as received at 4:30 PM on 22 Sept 1987. This message contained official notice from "OSAF" of "... a visit to General Dynamics by Mr. Richard Kaufman, General Counsel of JEC, and Mr. A. E. Fitzgerald, Management Systems Deputy, SAF."

Mr. Fitzgerald asked Col Riggs if the AFPRO was operating under the AFSC Commander's instruction forbidding any "VFR direct" flow of information outside of AFSC. Col Riggs said he was not. Mr. Fitzgerald then asked Col Riggs if in the past several years he had been under any such instructions. Col Riggs said he had not.

Confronted with the demand that he furnish documentation instructing him that Mr. Fitzgerald was in effect a Congressional staffer, Col Riggs finally said that he had received "verbal instructions" to that effect. At first, he refused to say who he had talked to. Then he said that he had talked to Contract Management Division (CMD) Hq, AFSC, the Pentagon, and the SPO. He then said that he had talked to General Weiss' "office" at CMD, but refused to say who in General Weiss' office. Later, after much more argument, Col Riggs said that his instructions came from Col Lovelace at CMD Hq, Col Strickland at AFSC Hq, Col Taylor at the Pentagon, and General Baglet and his assistant, Mr. Bralee, at the F-16 SPO. Finally, Col Riggs and Major Wickers said they would put Mr. Fitzgerald on report for refusing to return the documents. Mr. Fitzgerald then called General Watts in the Pentagon to request his assistance in countermanding the AFPRO's orders to refuse to make documents available.

At this point, Mr. Willy Livingston, GD's Vice President for Productivity, joined the meeting and said he would escort us to the tour of the IMIP activities. Before leaving for the tour, Mr.

Kaufman asked Mr. Livingston to make available for later discussion with GD officials the production and inspection reports for two F-16s. One of the aircraft for which reports were requested was the F-16 in which Capt Harduvel was killed in November 1982. The other was an F-16 aircraft involved in an accident on June 23, 1987. Mr. Kaufman provided the serial numbers for the two aircraft to Mr. Livingston.

We then proceeded to the area where the tour was to begin, with Mr. Roy Knepper again leading the way. In the course of the tour, we asked repeatedly for verification and documentation of the claimed performance improvements and savings. AFPRO and SPO personnel both told us we would have to get this from GD, that the Air Force did not have the specifics. In addition, we asked specifically for the time studies showing that one operator could tend to only two automatic milling machines and for the complete case study of the robot drilling and routing on the so-called "IR Panel Robots". In all cases, the AFPRO people demurred, saying that we would have to get such information from the SPO, and the SPO representative referred us to the contractor. We were also told that Mr. Livingston knew of our questions and was prepared to answer them after the tour was completed.

After the tour, we met with Mr. Livingston, Mr. Ted Webb, GD F-16 program manager, Mr. Bob Eastburn, GD General Counsel at Fort Worth, Col Riggs, and Major Wickers. (The SPO representative, Capt

Rick Hansen, left the plant to catch a plane and was not present at the meeting).

Mr. Kaufman questioned Mr. Webb and Mr. Livingston regarding GD incentives for cutting costs. Mr. Webb replied that in part they were undertaking ManTech and IMIP improvements (referred to by Webb and Livingston as TechMods) to reduce costs and become more competitive. As examples, he cited the international competition for air superiority aircraft and the fact that F-16s had recently been sold to Israel and South Korea. A second reason for making technical improvements is that "the Air Force wants us to." The GD officials acknowledged that there was only limited cost competition for the sale of fighter aircraft and that production costs could be reduced without technical improvements by more efficient management. Mr. Webb stated that as long as the Air Force made ManTech and TechMod (IMIP) money available, it would be irrational not to take it.

The GD officials were asked to explain the advantages to the company of using Air Force funds to partially finance technical improvements. It was replied that in exchange for using Air Force funds for ManTech and IMIP projects, the company agreed to make available to other companies throughout industry the technical improvements achieved. However, as any improvements would be developed and implemented at GD, the company would acquire valuable lead time advantages over their competitors. It was pointed out that ManTech projects were competitive and that companies submitted bids for them. IMIP, on the other hand, was financed out of program funds, and agreements were reached with the SPO as to how much to spend on IMIP in a given program. It was agreed that we would be furnished information about TechMod and ManTech annual funding trends. (The information was not provided during the visit).

Mr. Livingston made a presentation of four vu-graph charts illustrating F-16 modernization savings. The first chart was a flow-chart of the F-16 modernization savings assessment process with labeled boxes depicting various steps and events in the process. The boxes labeled "Cost Benefit Analysis, Modernization Savings Forecast, Performance Assessment, and Savings Achievement" were foot-noted "AFPRO audited". We asked for the audits for the examples shown us. Mr. Livingston's presentation did not include before and after comparisons of bills of labor and bills of material for the TechMods. There was limited quantification of claimed "actual manhour reductions" for one project -- the automatic drilling of the vertical fin. (The information was not provided during the visit).

Mr. Fitzgerald questioned Mr. Livingston about his association with the American Productivity Center (APC) headed by Jackson Grayson. Mr. Livingston said that he was active in a panel of the Center and that the APC panel, which included representatives from industry and the government and was chaired by Dr. Stimson of the Office of the Secretary of Defense, was opposed to "more control mechanisms". He said their opposition was "philosophical, not technical". When asked if what he was really saying was that he and his APC colleagues just did not want the Air Force to see the work measurement results (including the standard hours and the bill of labor), he declined to answer.

Col Riggs announced that the list of change proposals provided the day before was in error and that the total price for the four proposals was only a little more than a million, not a billion, dollars. However, Col Riggs had passed on to GD our request for an explanation of recent proposed contract changes, which appeared to total more than a billion dollars. Mr. Webb of GD provided the following breakdown.

RECENT SUPPLEMENTAL AGREEMENTS

Peace Marble II (Israel)	$811.8M
Peace Bridge (Korea)	211.0
AIS Multiyear II	520.2
TOTAL	$1552.0M

Mr. Webb explained that the new order from Israel was for 75 additional F-16s, and the order from South Korea was for 86. We pointed out to Mr. Webb that unit prices for these orders worked out to $10.8M per aircraft for the Israeli order and $6.1M for Korea, and that these unit prices were far below U.S. prices. Mr. Webb explained that the figures for Israel were only "a piece of Peace Marble" and the figures were only "a piece of Peace Bridge". He said he would get us the complete figures. He also explained that the $520.2M listing for "AIS Multiyear II" referred to the "Avionics Intermediate Shop", two-thirds of which was for the U.S. Air Force. He said the $520.2M was only part of the AIS project and that there was a lot more money associated with it. (The information was not provided during the visit).

The subject of discussion was shifted to the F-16 electrical system and the problem of wire chafing. Mr. Kaufman asked the company officials if they were able to locate the production and inspection records requested earlier. Mr. Eastburn replied at some length that the company was involved in litigation with the widow of Capt Harduvel, and that motions were pending to set aside the jury verdict against the company or, in the alternative, for a new trial. Mr. Eastburn said that the company had been contacted by the TV program "60 Minutes" about the Harduval case, and that GD had supplied a statement to "60 Minutes". Mr. Eastburn asked Mr. Kaufman if he had been contacted by "60 Minutes". Mr. Kaufman replied that he would not discuss any inquiries from the press or media.

Mr. Eastburn said that the company had decided that the federal court where the Harduvel case was pending was the apporpriate forum to make available facts about the Harduvel accident and that the company did not want to discuss the case in an informal meeting such as the one in progress. He said that he would not provide the production and inspection records that had been requested. Mr. Fitzgerald asked the GD officials if they would make the records ✓available to the Air Force. Mr. Webb said they would do so. Mr. Fitzgerald then asked Col Riggs to take possession of the records so that they could be made available. Col Riggs asked Mr. Fitzgerald to put his request in writing and offered to adjourn the meeting to his office so that a request could be typed. Col Riggs was advised that it was growing late and that Mr. Fitzgerald and Mr. Kaufman would have to leave within a short time to make airline connections back to Washington, D.C. Mr. Fitzgerald made a hand-written request for the needed records and handed it to Col Riggs. Col Riggs became upset and handed the instruction back to Mr. Fitzgerald stating that the request was "garbage".

Mr. Kaufman pointed out that the request was made that morning to Mr. Livingston. Mr. Livingston acknowledged that the request had indeed been made at "9:28 AM". Mr. Webb said that the inquiry was directed at the Harduvel accident and the company did not want to discuss that matter. Mr. Kaufman replied that the Harduvel accident was only one of 66 accidents involving the F-16, and that information had been made public in the course of the Harduvel court proceedings about manufactduring and design deficiencies concerning the electrical system and the problem of wire chafing. He said that such problems in a defense program were appropriate ones for members of Congress and Congressional committees to inquire into, and that Senator William Proxmire, Chairman of the Subcommittee on National Security Economics, had ordered an inquiry. Mr. Kaufman added that he would accept the records for the aircraft involved in the accident on November 8, 1982, in lieu of the records for the Harduvel airplane, as one of the reasons for requesting the records was to compare actions taken during production and inspection in 1982 and more recently. (The GD officials declined to provide the records and they were not provided during the visit).

Mr. Webb stated that company management did not realize when they were informed about the visit that Mr. Kaufman wanted to discuss matters such as wire chafing. Mr. Kaufman responded that he had made it clear at the Air Force briefing in the Pentagon two weeks earlier that the Subcommittee had questions about the electrical system and wire chafing in the F-16. A GD official, Mr. Homer Boyd, was present at the Pentagon briefing. Mr. Kaufman also told Col Taylor, Air Force Congressional Liaison, in Washington, D.C., that he wanted to discuss the electrical system and wire chafing during his visit to the Fort Worth facility. Further, Mr. Kaufman said that Mr. Steve Cotton, a GD official in marketing and Congressional relations, had called him from Fort Worth several days before the visit and Mr. Cotton was told on that occasion that the electrical system and wire chafing would be discussed. Mr. Fitzgerald stated that the official message from the Office of the Air Force Secretary to Col Riggs and company officials stated that there would be questions during the visit about F-16 accidents related to electrical problems "especially frayed wiring harness advance of the trip about their position.

Mr. Webb replied that Mr. Kaufman was right, and he apologized for the situation. He said that some lower level officials were informed but management did not realize until Tuesday evening that the visit would include questions about wire chafing. Mr. Eastburn said it was not realized until the discussions yesterday, after the tour of the plant, that Mr. Kaufman wanted to talk about wire chafing. He added that he was aware that Mr. Kaufman had copies of field service reports about the F-16. (Mr. Kaufman had informed the AFPRO people the day before that he had copies of field service reports).

Mr. Kaufman attempted to address questions about the wire chafing problem and related matters to Mr. Webb. Mr. Webb was extremely evasive and made it clear that he would not respond to questions about the F-16. Mr. Eastburn said that if the Subcommittee would provide the company with written questions, they would consider whether to respond to them. He said that on receipt of such questions, the company would confer with the Air Force. Mr. Fitzgerald inquired why, if the company would provide the information to the Air Force, they would not provide it to Congress. Mr. Webb responded the company did not have a contract with Congress.

Mr. Fitzgerald stated that he, for one, did not intend to be a party to obstructing the work of a Congressional committee and urged that other Air Force people cooperate with Congress.

We left the aborted meeting with the GD officials and returned to Col Riggs' office where we met again briefly with Mr. Cire. We asked Mr. Cire about the video that had been discussed the day before. Mr. Cire said he had learned that the video had not been released as a TO, and that it had been made in July 1983. Mr. Kaufman asked Col Riggs to provide him with a copy of the video. Col Riggs said he would get a copy for Mr. Kaufman. (The video was not provided during the visit).

Mr. Cire was asked if he knew how many F-16 accidents or crashes were related to electrical problems. Mr. Cire said that without being privy to the details of the accident investigations, he is not in a position to know. That concluded the discussions at the Fort Worth facility.

Richard F Kaufman

RICHARD F KAUFMAN
General Counsel
Joint Economic Committee

A E Fitzgerald

A. E. FITZGERALD
Management Systems Deputy
Office of the Comptroller
of the Air Force

Mr. **Fitzgerald**. I would like to make just a couple of brief remarks about the matter of quality control matters in general that we are encountering in the Air Force.

One of the things that I noted in my visits to General Dynamics was something that I have seen in other Air Force plant representatives' quality control operations. That is a sad lack of independence.

We have a general condition in the control functions generally in the Air Force of a lack of independence, organizational independence. They should have a direct line of communication and instruction right to the top level of the organization. That does not exist in the way that it should.

We have an aversion in the Air Force to what is called VFR direct communication. VFR is visual flight rules. We have a horrible fear of information being disclosed without going through staffing or coordination, and I think this contributes greatly to our being caught by surprise on even our best programs, and the F-16, as General Monahan suggested, is generally considered to be our best large program.

We badly need attention to making our control people—quality control, cost control, whatever—independent and have an independent channel of communication and instruction so that they can be more aggressive than they are.

The quality control people generally that we have stationed in the plant I would characterize as passive to reactive. As we recorded in the trip report, many questions which I would expect the quality control people to know about they had to say they did not know.

The quality control people of our plant representatives office said that they did not get accident reports. They said that they got only those field reports that the contractor chose to give them, and that is wrong.

I would suggest that as a general proposition——

Senator **Proxmire**. Would you tell us what the field reports are?

Mr. **Fitzgerald**. Yes. These are field service reports, the ones that I was shown by Mr. Kaufman. The AFPRO had none, so they told us. The field service reports are prepared by contractor personnel describing problems that have been encountered in the field. They have field service representatives in the different operating locations.

So my suggestion is that we should be paying more attention—by "we" I mean my office as well as most others—to organizational independence of these vital control functions.

Senator **Proxmire**. General Monahan, in Ft. Worth last month, Colonel Riggs, the Air Force plant representative told my staff that 66 F-16's had been destroyed in accidents. The Air Force inspections and safety centers—and he sent me a list by letter dated October 16, 1987—that 74 aircraft were destroyed. A communication from your office received last Friday said 75-16's were destroyed. When I cound up the aircraft in the list provided October 16, the number is 80 aircraft destroyed.

How do you explain these discrepancies, and what is the correct number?

General **Monahan**. Hopefully, my office is correct, but 75 is the appropriate number of aircraft destroyed. The reason I think that you may have some other number other than 75 and higher is because of some accidents in which the airplanes weren't destroyed but they were accidents nevertheless. There were a couple of those, I think, but the 75 number is the correct number.

Senator **Proxmire**. I have a communication here from the Department of the Air Force, Headquarters, Air Force Inspection and Safety Center. It says here 74 were destroyed. Then it has a list of 80. They are all separate, and they are headlined "F-16 Destroyed Aircraft."

General **Monahan**. Mr. Chairman, I would have to take a look at it carefully and get back to you and submit it to you.

Senator **Proxmire**. If you will pick up that first chart that you put up.

I was struck by the fact that the last line on that chart said "Safest single fighter in U.S. history."

Now, that is very, very hard to believe in view of the number of losses.

My brother, when he was 25 years old, was killed in an Air Force crackup in Florida. That was 1939, and it was a rarity.

Of course, the war followed shortly after, and then many of his six best friends, five were killed in World War II, but in peacetime I am really shocked and I think most people would be shocked to hear that we had this number of aircraft destroyed and it is the best record. You say the best safest single engine fighter record in U.S. history.

Can that be true?

General **Monahan**. Yes, that is very definitely true. You go back to the early 1920's, and you can find the rates were like 400 or higher. Back in the days of World War II, I hesitate quoting numbers off the top of my head.

Senator **Proxmire**. I am not talking about wartime. That is something else. I am talking about peacetime.

General **Monahan**. Even in peacetime, if you go back and look at the record, the F-16 is by far the safest.

Now, you might be able to find some obscure, small fighter attack airplane that didn't go very fast way back in the 1920's and 1930's that may have done better. I don't know. But at least no jet, single engine jet fighter, has ever done anywhere near that. I can tell you that for sure.

As a matter of fact, most of our twin engine jet fighters don't do that well.

Senator **Proxmire**. Mrs. Harduvel, did you want to make an observation? Won't you come forward so we can hear you? Come to the microphone.

Mrs. **Harduvel**. I was just observing, sir, that all of those jets listed up there are 1960's designed and built. I would like to know why the state of the art fighter since 1970—the F-14, the F-15, and the F-18 as well as the F-4 and F-5—all have twin engines. I would like to know why he is comparing those to 1960's technologies, sir?

That is my question.

Senator **Proxmire**. General Monahan, go right ahead, sir.

General **Monahan**. First of all, that is what is available. Those are what those aircraft did back in those days.

By the way, you bring up a very excellent point regarding technology. The F-16 is much higher technology than any of those other aircraft. That is why it has reliability rates and safety records that are so much better.

There is a myth around that says if you put more complexity and higher technology into an airplane that you lose reliability. In fact, the opposite is true.

The F-16 is at least twice as easy to maintain, maybe three or four times easier, than the old airplanes that it replaces. It is much more reliable.

We can fly these airplanes in search situations six times a day. As a matter of fact, in one case we did it eight times a day. And then we run out of pilots, and that is when we have to stop flying.

The airplane, with the new technology, became this excellent safety record.

Senator **Proxmire**. Mrs. Harduvel, go right ahead, and then Mr. Acosta.

Mrs. **Harduvel**. I just have one more question.

I remember reading in March 1983 Safety in Flying magazine what they thought the accident rate was going to be for 1983.

Can you explain to me why they only thought they were going to lose five F-15's and 23 anticipated losses in F-16's?

And they broke it out to the point where you were going to lose five to electrical problems and nine to engine problems.

Twenty-three to five, sir.

General **Monahan**. I can tell you this. We did much, much better than those projections.

Senator **Proxmire**. Thank you, Mrs. Harduvel.

Mr. Acosta.

Mr. **Acosta**. Senator, I was just going to comment that we found when we were doing our research that back in the 1980 to 1982 timeframe the crash rate was much higher for the F-16. It declined after 1982, when they started programs to make fixes to the jet, and today it is one of the safest jets. I think in the last year it is somewhere down around 3½, or something like that.

They have done a lot of fixes to it. It is a lot better today than it was in the beginning of the program. The early statistics were anywhere from 14 to 22 crashes per 100,000 flight hours back in the 1980 to 1982 timeframe.

The overall figure for the Air Force, the overall average, is about 2½.

Senator **Proxmire**. Now, it is good to have both of you folks on the same wavelength here, but let me say that I am not on the same wavelength, and I will tell you why.

I have a table here showing a number of F-16's destroyed per year; 1983, 11; 1984, 9; 1985, 12; 1986, 11; 1987 through October 16—the year is not over yet. We still have 2½ months to go—8.

So I don't see any improvement at all. If anything, it is higher. The best year was 1984.

Mr. **Acosta**. There are more airplanes.

General **Monahan**. Much more flying going on.

Senator **Proxmire**. More flying, but the same number or a little higher crashes.

General Monahan, how do you explain the fact that the Air Force plant representative where the planes were built told my staff on September 23 that only 66 had been destroyed.

General **Monahan**. I have no idea, Mr. Chairman. He obviously didn't have the proper information. I don't know.

Senator **Proxmire**. The Air Force plant representative said he did not know how many men had been killed in accidents.

How do you explain that?

General **Monahan**. Again, you would have to ask him. He just doesn't have the information.

Senator **Proxmire**. Shouldn't that information—it seems to me that the loss of a life is absolutely of overwhelmingly importance. It dwarfs—I don't care if you are talking about millions or billions or whatever—it. The loss of life is a crucial thing, and it seems this is the man in charge and he didn't know how many lives were lost.

General **Monahan**. First of all, the AFPRO does have available to it all the service reports, all the accident reports throughout the history of the program. So all that information was there. He just hadn't probably counted it up.

Senator **Proxmire**. Colonel Riggs also said he had never read any of the accident reports concerning the F-16 crashes.

Should the F-16 Air Force representative be better informed about aircraft once they go out the door? Couldn't that have a bearing on accident controls at the plant?

General **Monahan**. The AFPRO commander is provided with just a tremendous amount of information.

First of all, it is all service reports. Those reports the Air Force generates and says here are difficulties we find with the airplane out in the field. He is provided a copy of every single one of those.

So if they find difficulties with aircraft that are already fielded, he gets it.

Senator **Proxmire**. I understand that the superiors of this man wouldn't give him the information unless they thought it was important.

General **Monahan**. No, that that is not correct. That just isn't correct.

There also is another thing. The F-16 program has this very unique—something called the centralized data system. All F-16 bases as well as the AFPRO as well as the program officer back at Patterson as well as the depo at Hill Air Force Base in Utah. There are computer terminals where all writeups of any defect that any airplane has had is recorded. All of this is shared among all these people.

We have had this in the system since way back, perhaps, 1979, 1980.

Senator **Proxmire**. Mr. Fitzgerald, can you describe briefly the functions of the Air Force plant representative, his staff, and the system program officer? In your view, are there adequate numbers of employees in the F-16 Air Force plant representative's office, in the systems program office to perform the management control functions and quality control functions?

Mr. **Fitzgerald**. I will try.

The Air Force plant representative is our representative to the contractor, at least in theory. He receives delegation of authority, particularly in the area of contract administration, from the system program office and the procuring contracting officer. He is responsible for day-to-day oversight of the activities that go on in the plant under delegation from the system program office. He may get a delegation from a number of program offices covering all the work that is done in the plant.

He is responsible for not only contract administration but for engineering liaison and oversight, for quality control. Usually quality control is the largest single component of detachment located at these places.

In my view—I can't speak specifically to General Dynamics, since I have spent relatively little time there or with the program—all of the AFPRO's are adequately staffed if they apply themselves correctly. The problem is that we have—as I said before, we have not given these people the independence that they need and, contrary to what General Monahan said, we were told by not only the AFPRO but by his subordinates—perhaps they were told to say this, I don't know—that they did not have access to these reports and information.

I think in the area of quality control, where I started my professional career and got out only because I found I couldn't stop delivery of airplanes, of bad airplanes, I think we spend too much time inspecting inspectors, the contractor's inspectors, and evaluating his paperwork system, and not enough time in product inspection.

I am not saying we shouldn't do any of the evaluation of contractor systems and checking up on his inspectors, but we need more of the actual hands-on physical inspection of the product to learn about it, if nothing else.

In the tours of the plant that we had, I looked at the production paper, the production records that are on the floor. I didn't find a single Air Force inspection stamp during the whole period.

This is one of the reasons that Mr. Kaufman and I asked for copies of production and inspection records. We wanted to determine whether the incidence of actual inspection had increased since the early spate of accidents. We were, unfortunately, unable to get access to that data.

Senator PROXMIRE. General Monahan, Mrs. Harduvel and her attorneys testified that the design and manufacturing defect led to electrical malfunctions that caused Captain Harduvel's plane to crash. The Federal jury agreed and ordered General Dynamics to pay $3.1 million in damages.

Does the Air Force still believe that pilot error caused the crash?

General MONAHAN. Mr. Chairman, I am not going to comment on the findings and conclusions and recommendations of any one specific mishap, and I think we discussed that a little bit earlier.

Also, there is litigation underway in this particular case. So I don't think it would be appropriate if I did comment.

Senator PROXMIRE. General, the original accident board of the Harduvel crash was recently reconvened.

What did it say?

General MONAHAN. I don't have a report from the accident board.

Senator **Proxmire**. There has been testimony supported by considerable evidence linking electrical problems to many other crashes.

Would you comment on this and state whether the Air Force believes the electrical problems contributed to any other crashes?

General **Monahan**. Let me put the electrical system of this airplane in the proper context.

You know, you heard it referred to earlier here as the electric jet.

Now, what do we mean by that?

It is the first airplane in history that relies upon electrical power for the airplane to remain under control. Other aircraft have hydraulic systems or mechanical systems that control the air flight.

So even if you have complete electrical failure in all other aircraft, you are still able to control the airplane. The same is not true with the F-16. The F-16, it is necessary to have a constant supply of electrical power to the flight control computer—that is the key—and then to the flight control actuators in order to control the aircraft.

For that reason, the electrical system of the F-16 has had a tremendous amount of attention. We paid an awful lot of attention to fixing the problems that we found with it early on. Any time we found anything that looked electrical we jumped on it and went out and worked for solutions to it.

I will tell you that we have never judged that an accident has been caused by electrical wire chafing.

We have had incidents, this is true. We have not had an accident caused by electrical wire chafing.

Senator **Proxmire**. You say you have not had an accident caused by electrical wire chafing?

General **Monahan**. Yes.

Senator **Proxmire**. You make that a flat statement?

General **Monahan**. Yes.

Senator **Proxmire**. How do you know that?

General **Monahan**. All 75 of those accidents were subjected to a very exhaustive investigation and we have not attributed any of them to electrical wire chafing.

Senator **Proxmire**. Have you read all those reports?

General **Monahan**. I have not personally read every report, but I am familiar with them.

Senator **Proxmire**. Then how can you make that statement, General? How can you testify that that is the case?

General **Monahan**. The people that had read reports and the people that are responsible for that told me.

Senator **Proxmire**. Your information is secondhand?

General **Monahan**. My information is secondhand, and I can verify it for you.

Senator **Proxmire**. But you did not read the reports yourself? Why haven't your read those reports?

General **Monahan**. There is no reason for me to read every single report of every accident. We have people who have that as a responsibility—the engineers, the people in the program offices.

Senator PROXMIRE. Let me just interrupt to say that the Air Force representative in Ft. Worth told subcommittee staff the same thing.

Who reads them? Nobody?

General MONAHAN. These reports receive tremendous scrutiny on the part of the people who have the responsibilities associated with those reports for things that have to be done.

Senator PROXMIRE. Don't you have responsibility?

General MONAHAN. I have a responsibility, but I don't have the direct responsibility for fixing every airplane that has a problem that is a result—I will tell you who does, though.

Senator PROXMIRE. Certainly, the Air Force plant representative has that responsibility, does he not?

General MONAHAN. He has the partial responsibility. The person who has the primary responsibility for fixing something is the one who has the technical responsibility for the airplane at that particular time. That is one of two people.

Normally, the aircraft is still in development, the early stages of production, and it would be the program manager, the program director of the Air Force Systems Command.

Senator PROXMIRE. The Air Force plant representative has 250 people. He didn't read the report, and none of the 250 people read the report.

It sounds like one of my speeches. Nobody reads them. [Laughter.]

General MONAHAN. That is very, very wrong, Mr. Chairman. People do read the reports, and they take them to heart.

How do you think we are able to devise so many means and so many fixes to get that accident record down the way it is?

The way you do that is by taking an awful lot of care with what you see in those reports, and those reports are just one input. You get many, many other inputs from many different places.

Senator PROXMIRE. But you don't read the report when the plane is built. It seems to me if they don't read the report there where it is built, that is the most important place where they could read it.

General MONAHAN. The most important place where you have to read that report are the engineers who are in the system program office or who work for the system manager at the Air Logistics Center. Those are the people who are just absolutely crucial and very, very important that they read the report and that they thoroughly know and understand everything that happened, and those people do.

That is how we came up—you heard—with that Falcon Rally program. That is how we came up with the Falcon Rally program, was by very carefully scrutinizing everything that had ever happened to the electrical system on this airplane. That is why we were able to put into place the many fixes that we did.

Mr. FITZGERALD. I would like to add to what General Monahan said. I think it is absolutely vital that the on-the-scene quality control experts read and understand what they are reading in field reports of all kinds, including accident reports. Aside from the direct product inspection, the most important thing the quality control function does is identify and seek to eliminate what they call assignable causes of defects.

If they don't know what the defects are or the failures are, they don't even have a starting point from which to start isolating those assignable causes. That was why I was so startled when I was told—and Mr. Kaufman and I were both definitely told—that they did not get the accident reports.

I am a little puzzled. I presume General Monahan and I will talk later about this, why we were told that if it were not true.

I am gratified in a way to learn that there is at least a central index where the person could look it up if he wanted to, but I think it is just vital that this information be disseminated not only to the system program office but to our onsite inspectors and quality control staff experts.

Senator **Proxmire**. Let me ask you, General Monahan, when did the Air Force begin classifying accident reports, and why are the portions of the report concerning the causes of accidents classified?

General **Monahan**. First of all, Mr. Chairman, I don't know if classified is exactly the right term. We don't release the report. It's not a security classification that goes with them.

Senator **Proxmire**. If they are not classified, we should be able to get them. Mrs. Harduvel should be able to get them and others should be able to get them. Isn't that what classification means, that they're not made available except to those who have to know?

General **Monahan**. They are held as official business within the Department of the Air Force.

Senator **Proxmire**. If they are not classified, they have no basis for withholding them.

General **Monahan**. They do not have a security classification. They could, depending upon what the accident is or what the aircraft is, and some factors, they could have certain aspects of them.

Senator **Proxmire**. It seems to me it was improper to withhold these documents from Mrs. Harduvel, from her lawyers, from this subcommittee, if they did, and from the Congress. They are not classified.

General **Monahan**. Mr. Chairman, let me explain what it is that we do release and what it is we don't release and why.

Senator **Proxmire**. Before you do that, let me ask you what is the legal basis for withholding this information?

General **Monahan**. First of all, the report comes in two parts, part 1 and part 2. Part 1 includes all the factual data that is gathered in the course of the investigation. That is released.

Part 2 includes the Air Force's investigative team's conclusions, recommendations, findings, as well as, I believe, some testimony. The reason for maintaining the confidentiality of that is to maintain the confidentiality of the witnesses. We need people to come forward and tell us exactly what happened, without fear of reprisal, without fear of court action or judicial action or anything of that sort. So it has to be done under that kind of a situation.

They don't have to worry about somebody appearing in court some day and those kinds of things. That is the only way we can really truly get from all witnesses and all the very key people who would be associated with mishaps, the only way we could get all the information we need.

Senator **Proxmire**. General, I may agree or disagree with you. But I want to know what the legal basis is for withholding this information from the widow of a pilot who has been killed or from a congressional committee. What is the legal basis?

General **Monahan**. I don't know the legal basis that says it has to be released either, Mr. Chairman. I just don't know. I am not a counsel; I am not a laywer.

Senator **Proxmire**. So you can pick and choose whatever you want to release.

General **Monahan**. No, Mr. Chairman. I believe it comes under the heading of executive privilege. That is kind of broad.

Senator **Proxmire**. Has the President exerted executive privilege in this case, the President of the United States?

Mr. **Fitzgerald**. Mr. Chairman, executive privilege was the reason given for withholding it when we were at the plant.

You know, I am puzzled myself by that, because in my long, unsought experience with lawyers, I have come to understand that executive privilege can only be asserted by the President himself with respect to communications with the President. Even that is somewhat dubious, as we have seen in a recent round of hearings in which advice given to the President was aired extensively to the public.

I don't understand the plea, but that was what we were told, just as General Monahan said, that executive privilege is the legal basis.

Senator **Proxmire**. Let me ask both of you gentlemen, when has this President or any President asserted executive privilege in connection with this reports? When? Is there a document of any kind? Is there a statement of any kind? If he hasn't—you shake your heads, and that means that as far as you know he hasn't done it. You just pulled executive privilege out of the air?

General **Monahan**. Oh, no, Mr. Chairman. You asked earlier when did the Air Force start, you said, classifying the reports. The Air Force has never released certain parts of the report.

Senator **Proxmire**. You say the report is not classified.

General **Monahan**. That's right.

Senator **Proxmire**. You are asserting executive privilege.

General **Monahan**. That's right.

Senator **Proxmire**. Yet you have no evidence at all that the President of the United States has ever asserted that, and only the President can do it. I can't do it and you can't do it and Mr. Fitzgerald can't do it. Nobody else can do it but the President of the United States, and you can't do it because he hasn't done it.

General **Monahan**. We will have to go back and research the record as to how that came about, Mr. Chairman, because I don't know that part of the history.

Senator **Proxmire**. We are going to ask the President of the United States whether he has done that.

General **Monahan**. Mr. Chairman, let me just make one statement. I think we would be doing a great disservice to the taxpayers of this country and to our security interests if all of a sudden we started releasing part 2 of those reports, because now we no longer have the promise of confidentiality for people to come forward and tell what they know. That is the only way we can get to the bottom of what happened in any one particular accident. If we don't have that kind of capability, we are not going to be able to do it.

And believe me, we leave no stone unturned in investigating the accidents. They are very, very thorough. We are not interested in where the blame lies, we are interested in finding out what happens to prevent it from happening again.

Senator **Proxmire**. General, you may or may not have a good case. But I am a Senator, I am a Member of the Congress, and I am convinced that if you do have a good case, you can convince the Congress to pass a law, providing that you can withhold that information and give you a legal basis for it. You don't have that legal basis now. It's not classified. The President has not asserted executive privilege, and all you say is that it's withheld and it's not going to be disclosed because witnesses won't come forward.

You may or may not have a good reason, but in this country we have to have legal action, action by the Congress, signed by the President, before you can assert that.

Let me ask you this, General. Who paid the costs of Falcon Rally? Did the Air Force or did General Dynamics?

General **Monahan**. Falcon Rally consisted of several—first of all, let me give you a straight answer to your question, and that is that it was a mix between the two in terms of the conditions of the contracts that we have with General Dynamics. First of all, Falcon Rally had, I think it was, like 111 ECP's, something of that sort. Of those, approximately about $46 million of the 111 ECP's, 87 of them had the correction-of-deficiency clause in the contract invoked. That is the clause that says that where there are any defects, that all aircraft that have been delivered within the past 180 days, that General Dynamics has the responsibility for fixing those.

And by the way, 27 of those ECP's were issued under the notice-of-deficiency provisions. Of the 111 ECP's, 44 of them turned out to be at no cost.

As I said, the total cost of the program to the taxpayer was $46 million. About $30 million of that was for one particular item, and that is when the Air Force decided that we should have an additional generator put in the airplane that does nothing but provide electrical power to the flight control system, the flight control computer so that the flight control computer would have redundant sources of electrical power.

Senator **Proxmire**. As I understand, the Falcon Rally was done largely to correct F-16 electrical problems. Why did the Air Force pay any part of these costs? Why didn't General Dynamics have to pay?

General **Monahan**. As I said earlier, you need to get in and look at the contractual arrangements between the Government and General Dynamics. I mentioned a number of them were done at no cost. A number of them were covered by the correction-of-deficiencies clause. And to the extent that any of that stuff was invoked, to that extent either General Dynamics paid for it or the Air Force paid for it, one way or the other. You have to look at each one of the ECP's one by one by one. As I said, 44 of them were at no cost; 87 of them were done under a correction of deficiencies.

Senator **Proxmire**. General, according to the Air Force, deviation and waiver requirements have been approved for every F-16 delivered since the start of the program. I understand that deviations and waivers are supposed to be only for minor contractual nonconformances. Why does the Air Force approve them, knowing all it has known about the wire chafing and other electrical system problems?

General **Monahan**. I believe your question, Mr. Chairman, was on waivers and deviations? Is that correct? I didn't hear the first part.

Senator **Proxmire**. That's right.

General **Monahan**. First of all, I wish that it were possible to have airplanes delivered with zero waivers and zero deviations. I don't think that in our entire history that that has ever happened with a military airplane or even with a commercial airplane, for that matter. Our airplanes are very, very good. They are not 100 percent.

Senator **Proxmire**. My point—I am sorry, you were distracted for a minute—I said that I understand that deviations and waivers are supposed to be only for minor contractual nonconformances. So why does the Air Force approve them, knowing all that it has known about the wire chafing and other electrical problems that are certainly not minor?

General **Monahan**. We certainly don't approve any waivers and deviations. By the way, each one of them we look at very, very carefully and make a conscious decision as to whether or not it's acceptable to us, whether or not or how much of the cost of the airplane we are going to pay. In any case, it's because of waivers and deviations that we withhold payments to General Dynamics until the waiver and deviation is taken care of.

Again, one must look at each of those item by item by item, and we don't approve them if we think there is a serious problem, a serious defect.

Senator **Proxmire**. Mr. Kaufman has a question.

Mr. **Kaufman**. General, according to the findings from the Federal jury trial in Tampa, FL, the waiver and deviation approved in the case of Captain Harduvel's aircraft led directly to his crash and the death of Captain Harduvel. That would seem to be a waiver of a deviation of quite a major defect in the aircraft.

General **Monahan**. Mr. Kaufman, I am not going to make any comments about that trial or whatever else is going on with that particular case.

Senator **Proxmire**. General, will you comment on the assertion that one reason General Dynamics failed to meet military specifications and industry standards concerning wire chafing was poor design, too much wire in too small a place, too much concentration of wires bundles and battery cables in the same right-strake area? That point was made very well by both Mrs. Harduvel and her lawyers.

General **Monahan**. Let me just comment about that business of the right-strake area and also about wire chafing. I mentioned earlier that because it's an electric jet, for the first time in history the airplane's flight control system depends on 100 percent of the time having electrical power available to it.

Therefore, anything that could possibly cause any kind of disruption or any kind of difficulty with the flight control system had to receive very, very close attention, which it did receive. The wire chafing was one of those that we just thought about in the program office back in about 1981–82 timeframe, somewhere in there, and we said, you know, this could always be a possibility, whereas chafing is not necessarily a real big worry in another airplane, it could be in the case of an F-16.

Therefore, we made things such as that videotape. The videotape was made so that our maintenance people would have very, very strong awareness.

Senator **Proxmire**. Isn't that exactly why you shouldn't be approving deviations?

General **Monahan**. As I say, you have to take a look at each deviation and each waiver and understand why it should or should not be granted. There is no way in the world I can comment.

Senator **Proxmire**. Mr. Fitzgerald, the earlier testimony indicated that in addition to design and manufacturing the F-16, General Dynamics determines what testing is necessary, prepares all test requirements and test equipment, and it is not normal for the Air Force to even witness the tests.

The contractor also prepares the specifications for changes and is involved in the investigation of accidents.

Can you comment on whether this pervasive involvement of the contractor more or less to the exclusion of the Air Force is common and whether it represents a good business practice from the Government's standpoint?

Mr. **Fitzgerald**. I believe, Senator—and General Monahan might want to correct me on this—that the Air Force generally approves the test plan, does it not?

General **Monahan**. Yes.

Mr. **Fitzgerald**. But the practice of delegating to the contractor is quite pervasive. One of the problems comes when the Air Force has to approve something that they probably know very little about.

Senator **Proxmire**. Why shouldn't they at least be allowed to witness the tests?

Mr. **Fitzgerald**. Absolutely. In certain mandatory tests.

Senator **Proxmire**. Normally, they are now?

Mr. **Fitzgerald**. Normally, or I would say often they are not. Not always, but there are certain mandatory inspection points at which we do witness tests. I think the problem comes particularly from a legal standpoint——

Senator **Proxmire**. Let me just interrupt to say that as I understand it, there are 650 Air Force personnel assigned to the F-16. Why can't they witness the tests? With that number of people, it seems to me——

Mr. **Fitzgerald**. I think that with the number of people we have in quality control sitting in the plant, they could do that. I remember when I was in the business myself, we and my clients used to live in fear of single inspectors from commercial airlines. These guys were all over us like a wet blanket. We couldn't make a move without their knowing what we were doing.

I personally am in favor of more of the hands-on product inspection. But I think it has been a matter of a policy decision that we have decided to back away from that in favor of doing more of inspecting inspectors and looking at their paperwork systems, and I think it has gone too far and we need to go back the other way.

Senator Proxmire. Let me follow up on that, Mr. Fitzgerald, by asking you this. Several of the questions I addressed to the Air Force prior to the hearing concerned the program subsidized technology improvements at General Dynamics. I requested the bills of labor and materials for a number of specific technology products in order to evaluate claimed savings. The Air Force response is that the projects are not evaluated on a bill of labor and materials basis, but rather through cost-benefit analysis.

Will you comment on the two methodologies and state whether cost-benefit analysis is appropriate?

Mr. Fitzgerald. Yes, sir, I certainly will. But first I would like to say that I did not see that response to you. I think I could have influenced it favorably had that happened.

The fact is that on several occasions, in accordance with my responsibilities, I have instructed the air staff and the commands to maintain the kinds of statistics that you requested. I am surprised to learn that they did not do that.

The problem with the method described to us at General Dynamics is that, first, it's very difficult to audit and verify that what they say happened did in fact happen. In the second place, it's almost impossible to attribute any claimed improvement to the specific changes made.

The more precise method that we have directed the field to follow would give you an exact, within reasonable tolerance, amount of work content that was reduced by the change. And I should add that that can be done in advance, particularly where you are going to the highly mechanized machining centers that we were shown by General Dynamics.

The reduction in should-take time is what we should be looking for in those applications and then we should compare the value of that to the cost. I didn't see that done explicitly.

Senator Proxmire. You will recall that you, Mr. Fitzgerald, and the counsel of the subcommittee looked at several technology projects before your visit to the facility. One was an advanced machining center. They said that the Air Force had savings of $8.1 million. It also says, "The decision to pursue this project was based on justification to develop and demonstrate significant new manufacturing technology in a relevant environment rather than cost savings per se."

What is your reaction to that?

Mr. Fitzgerald. I was very impressed with the physical setup. We were shown this by knowledgeable General Dynamics people and Air Force folks. But when we began to ask them about specific savings, I began to wonder, and it is something I intend to follow up on.

As described to us, there were six automatic machine tools involved, and they were going to save the labor of six operators for those machines but were going to add three people to operate the new setup. So it would appear that they saved the labor of three people on a single-shift basis. The problem there is that, in my judgment, most of those automatic machine tools can be operated two for one, two machines per operator, without the massive setup. And that is what I am saying that we should be tracking to look at the actual reduction, the time it should take to do that work.

I am not convinced that that particular setup, with only six machines controlled by this massive center, is actually going to pay out any time soon. We don't have the statistics actually, Senator, to demonstrate that yet, particularly in light of the fact that we did not get the bill of labor and the bill of material for production.

Senator **Proxmire**. General, do you have any further comments?

General **Monahan**. I would like to make further comments on the industrial modernization and the improvement program, Senator, not only with the F-16 but with other programs in the Department of Defense. In my opinion—and I am quite close to it—it's one of the better investments that the American people could make.

In the case of the F-16 program specifically, we have invested $173 million of the taxpayers' money for this particular program. The benefits we have achieved so far, we have negotiated already 320 million dollars' worth of savings in the future, just on future contracts that are now being negotiated. We anticipate an additional $429 million. Those are very important direct, realizable savings right then.

Another very important part of the industrial modernization program is that word "modernization." This is modernizing America's industrial base. We are taking factories that are using 1940's style technology and building them up to 1970's and now 1980's technology as far as the ability to manufacture and use and even have some surge capability should this country ever need it. So industrial modernization program is, in my opinion, very, very valuable, and the Congress has been very cooperative and has indeed been of great assistance in making sure this program will go forward.

Senator **Proxmire**. General, we are very interested in modernization and the cost of the F-16 program. We are anxious to cooperate with you in getting information. We want to thank both of you gentlemen for your testimony.

I want to conclude by making a statement here, and I hope you won't regard it as too harsh. But I feel very strongly about this. What we have heard today is a shocking story of heartless disregard by a major defense contractor that goes beyond defense waste and mismanagement, although there appears to be the usual quota of those attributes.

The most disturbing aspect has to do with the questions about safety. Men die in fighter aircraft; 27 pilots have been killed in F-16 accidents. How many of the crashes were avoidable? How many F-16 pilots died—not for their country, but for General Dynamics?

Accusations of callous disregard for human life would seem harsh under ordinary circumstances. In this case there is a Federal jury verdict that General Dynamics was negligent in the design and production of the F-16's. The jury found that the F-16 was defectively manufactured, that the company negligently failed to warn the Air Force about its defective condition.

We heard testimony that General Dynamics knew the plane delivered to Captain Harduvel was defective and those defects led to its destruction and his death.

How many other crashes and deaths were due to similar causes, It seems to me that we have a case of flagrant and reckless disregard to safety and a case of willful indifference to injuries that would likely occur in the flying of F-16's.

The taxpayer has also been abused. The 80 crashes of F-16's cost $1.4 billion. Perahps some of them were unavoidable or truly accidential. But when planes crash and men die because of hidden defects known to the manufacturer, we are experiencing accidents that go beyond the term "accident."

I am also concerned about the role of the Air Force. It seems to have been reglegated to not much more than paymaster and checkwriter. General Dynamics not only designs and manufactures the F-16, it changes the designs, tailors the military's specifications, obtains waivers and deviations, performs tests and inspections, charges the Air Force for the cost of fixing deficiencies, and conducts much of the accident investigations.

The Air Force seems disengaged and disinterested in much of the process. The subsidies given to improve General Dynamics' manufacturing technology are also questionable. When you spend $10.5 million for improvements that will save an estimated $8.1 million, it appears to be a losing proposition on the face of it.

The Air Force method for calculating benefits from these projects has also been challenged. I want to tell you I intend to pursue these matters further.

I want to thank the witnesses who appeared this morning. I want to thank both you gentlemen, and the excellent lawyers who have appeared with Mrs. Harduvel.

And I want to thank Mrs. Harduvel especially for her courage and perseverance. I want to assure you, Mrs. Harduvel, that the matter will not rest here.

The subcommittee will stand adjourned.

[Whereupon, at 12:05 p.m., the subcommittee adjourned, subject to the call of the Chair.]

DEFENSE ECONOMICS ISSUES

WEDNESDAY, DECEMBER 21, 1988

CONGRESS OF THE UNITED STATES, SUBCOMMITTEE ON NATIONAL SECURITY ECONOMICS OF THE JOINT ECONOMIC COMMITTEE,

Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room SD-628, Dirksen Senate Office Building, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire and Grassley.

Also present: Richard F Kaufman, general counsel; and Kris Kolesnik, investigative staff, office of Senator Grassley.

OPENING STATEMENT OF SENATOR PROXMIRE, CHAIRMAN

Senator PROXMIRE. Today, if anybody is in doubt, is the first day of winter and the shortest day of the year, but there is time enough to throw some light on one of the most reprehensible practices in the procurement of weapons: the black market in Defense Department classified materials.

This past spring and summer, there was voluminous reporting of what came to be known as the "Pentagon fraud scandal." The difference between the practices disclosed in the fraud scandal and those that will be discussed today is that the summer scandal involved the selling of bidding and proprietary information, while today's hearing concerns the selling of classified documents.

Some may wonder which is worse. In my view, it is inherently worse to sell classified information than it is to sell business information. The results of both practices on defense contracting may be the same. In each case, the practice of leaking and trafficking in inside information leads to collusive bidding by defense contractors. In both cases, the taxpayer is cheated.

But once classified information is allowed to go outside its normal channels, there is risk that it may fall into unfriendly hands. We must, therefore, view with considerable concern this black market in classified documents.

One of the key issues in this hearing is whether the Defense Department and the Justice Department have been properly concerned with this problem, or whether there has been an effort to minimize its seriousness or to cover it up. Another important issue is how widespread the practice is—whether it involves one contractor, a handful, or many, and how many private consultants and Pentagon officials may also be involved.

A third issue is why there have been so few prosecutions, why most of the names of the contractors are being withheld, and why not a single Pentagon official involved in the practice has been identified.

I have invited Senator Charles Grassley, who is not a member of this committee, to sit in with the subcommittee for this hearing because of his long involvement and keen interest in the subject matter. Senator Grassley has been a thunderous voice in the Senate, calling for reform of defense procurement, and he has been very effective, as well as right, in his approach.

Before we hear from the witnesses, I have asked the staff to present a brief staff report summarizing the results of the investigation they did for this hearing. Richard Kaufman, general counsel of the committee, and Kris Kolesnik, who will be here shortly, of Senator Grassley's investigative staff, will present the staff report.

After they have finished—and of course, first I will turn to Senator Grassley—before I do this, let me just say that the first witness will be Donald Mancusco, Assistant Inspector General for Investigations in the Pentagon Inspector General's Office.

We will then hear from two individuals, Robert Segal, a former investigator, and Sam Maxey, a present investigator with the Defense Department's Office of Inspector General.

We have a short written statement from Mr. Segal and no written statement from Mr. Maxey. After Mr. Segal presents his statement and after Mr. Maxey makes whatever statement he would like to make, we will question these three witnesses.

We will then hear from John Donnelly, Director of the Pentagon's Defense Investigative Service, and Ernest Fitzgerald, of the Office of the Comptroller of the Air Force.

Senator Grassley, please proceed with your opening statement.

OPENING STATEMENT OF SENATOR GRASSLEY

Senator **Grassley**. First of all, Mr. Chairman, thank you very much for those kind remarks you just said about my participation in this issue of reform of the Pentagon over a long period of time, and thank you very much for inviting me to participate in this set of hearings, to once again join you in a matter of utmost importance to the American people. It is my understanding that because of the lateness of your term of office and your retirement from the Senate, that this is probably the last time that you are going to be on this side of the dais.

We thank you for your contribution to the effort to save taxpayers' money. We thank you for your contribution over the last at least 20 years for bringing out all of the evidence of waste, mismanagement, and fraud in the Pentagon. It is surely my hope that you in your new profession will be as helpful from the other side of the dais as you have on this side of the dais in promoting integrity of government, in fighting what has often been a lonely battle on behalf of the taxpayers of this country. We welcome your continued participation.

This hearing today provides what I think is conclusive evidence that the Government has indeed known for several years of the trafficking of classified and other sensitive documents and has simply failed to stop it.

As I said in a speech on the Senate floor, evidence we had in June at the time of Ill Wind, it is the same story again. The Government has been asleep at the switch. The evidence presented today is going to substantiate those charges, in my view.

Our respective staffs conducted a detailed investigation, including numerous interviews of Government investigators, between July to November of this year. Their findings are presented in the staff report that you are about to hear our staff give.

The report details the chronology of investigation by Defense Department agents into documents trafficking and also the failure of the Justice Department and senior Defense Department officials to address the problem, despite their awareness of the problem.

A Defense Department memorandum appended to the staff report substantiates the charges against DOD. The memo dated May 21, 1985, was signed by then-Inspector General Joe Sherick and sent to then-Secretary of Defense Casper Weinberger.

Sherick described a 2-year investigation by his office into trafficking, including corruption of Government officials.

Most of the information trafficked, according to the memo, was "of such value to hostile powers that it could not even be declassified for court use." In other words, the same thing we are allowing to go on in our Defense Department and not doing anything about it is the very same treasonous acts that people, if they were in the Soviet Union doing the same thing, would be brought before the firing squad.

Sherick urged strong action in the memo. Weinberger's general counsel disapproved the recommended action without forwarding the memo to the Secretary. The result was a failed opportunity to crack down on this sort of trafficking of documents 3 years ago.

The staff report also details the chronology of a subsequent investigation by the Defense Investigative Service of 23 companies suspected of bootlegging, including the memorandum from former DIS Director Thomas O'Brien to Deputy Under Secretary of Defense for Policy Craig Alderman, dated May 29, 1987. O'Brien states in the memo that the bootlegging has been a major concern and that DIS uncovered numerous instances among contractors.

However, O'Brien erroneously concludes, as evidenced by the Ill Wind case 1 year later, that the problem of bootlegging has ceased.

What we learned in the course of our investigation raises allegations that widespread bootlegging was in the process of being uncovered by DIS in that investigation and it was then put under wraps.

The allegations are reinforced by a statement made by DIS Director John Donnelly to Senator Proxmire and myself when we made a personal visit to the DIS office at Buzzards Point on September 19 of this year. We had previously requested investigative summary reports from DIS of 23 investigations conducted by a special task force created by DIS in 1986.

The purpose of these investigations was to determine if the 23 contractors had obtained classified or sensitive documents improperly or illegally.

We were told by Mr. Donnelly, in response to our request for summaries, that the Department of Defense General Counsel's Office had directed him to withhold the documents because information in them could be used by defense attorneys in a pending criminal case, *U.S.* v. *Zettl.*

The Zettl case involves alleged illegal acquisition of classified Pentagon documents. And we were told by Mr. Donnelly that Zettl's attorneys could use information in the summary reports to support their argument that the practice of bootlegging was widespread.

In other words, Mr. Donnelly indirectly admitted there is information in the documents which we requested about possible illegal activities by defense contractors.

A copy of our correspondence with Mr. Donnelly in this matter is also appended to the staff report.

Now, if I read Mr. Donnelly's written testimony correctly, Mr. Chairman, today he is now prepared to provide these reports to us. So, we may be hearing the sound of concrete cracking.

Mr. Chairman, I think it is fair to draw the conclusion that the practice of bootlegging is, in fact, widespread, and is probably still going on. We are here today to find out why it has occurred, who in the Government knew about it, and why nothing was done about it. Most importantly, of course, we must determine what, if anything, can be done to stop it.

I would like to conclude my comments by recalling a comment once again that I made on the Senate floor in June, when the Ill Wind case surfaced. There was a sweeping reaction in Washington of great surprise, if you recall, in June, that such sensitive information was moving around so freely. I likened those expressions of surprise to the Claude Rains line in "Casablanca" when he expressed shock that gambling was going on in Rick's Cafe while pocketing his winnings.

It is my expectation that today's hearing will show that while that analogy was so appropriate. It's time that we in this city face up to the fact that there is rot in the system, it can no longer be covered up, and the American people will not stand for it.

And I think we have a real opportunity now as we go to a new President assuming office on January 20. If that new President is in fact going to be a hands-on commander-in-chief we are going to be able to send a signal it is no longer "business as usual at the Pentagon."

I think we are going to be able to show that on January 20—or at least we have the opportunity to show on January 20—that it is "morning in the Pentagon" and a new day for reform and a resulting stronger national security for less dollars as a result.

But that is only if the power and the weight and the prestige of the White House is behind these changes. And I think one of the reasons that this hearing is going to show why we have such a problem in the Pentagon is that the Pentagon is like the Tower of Babel: Nobody knows on the one hand what people on the other hand are saying. And we have a real opportunity now after January 20 to show that the Pentagon is going to be a plain-spoken Eiffel Tower, where we are going to have a change.

We have an opportunity for change, and that change has to have involved with it a lot of reform. I look forward to that new day, Mr. Chairman, and I appreciate your invitation to participate in the hearing this morning and look forward to some enlightening testimony that we are going to have.

Senator **Proxmire**. Thank you very much, Senator Grassley, for a very forceful statement.

We are going to hear brief summaries—and I mean brief summaries—from the two people who have done a great deal of work on this, starting way back in July, as Senator Grassley mentioned. And they have worked very hard.

First, the general counsel of the Joint Economic Committee, Richard Kaufman.

STATEMENT OF RICHARD F KAUFMAN, GENERAL COUNSEL, JOINT ECONOMIC COMMITTEE, ACCOMPANIED BY KRIS KOLESNIK, INVESTIGATIVE STAFF, OFFICE OF SENATOR CHARLES E. GRASSLEY

Mr. **Kaufman**. Thank you, Mr. Chairman.

I will give a brief overview of the staff report. Then Mr. Kolesnik will summarize the facts that are contained therein. I will then give an overview or summary following Mr. Kolesnik's statement.

At your direction and at the direction of Senator Grassley, Kris Kolesnik and myself began an investigation this summer which we have continued through the fall and up to the present time, to try to understand the practices that were described in your opening statement.

In the course of that investigation we interviewed, personally, approximately a dozen Defense Department investigators who have been involved in investigations of the bootlegging and trafficking in classified documents going back to the year 1983.

Some of those investigators worked with the Inspector General's Office of the Pentagon, but some of them worked in other investigative offices of the Defense Department. Our report is, therefore, a summary of those interviews. They describe what can fairly be termed "the existence of a black market in classified documents." A black market is defined in economic terms as the illegal sale or acquisition of goods and services. And that is precisely what the facts demonstrate.

Furthermore, that this practice was known to senior officials in the Defense Department and in the Justice Department at least as early as 1983.

Senator **Proxmire**. Mr. Kolesnik.

Mr. **Kolesnik**. Thank you, Mr. Chairman. I will briefly and quickly go through the next four sections.

In September 1985 the GTE Corp. pled guilty to unauthorized possession of a Defense Department planning document. Two GTE employees and a consultant also were indicted on six counts. The remnants of that case is the *U.S.* v. *Zettl* case, which is still pending in the U.S. District Court in Alexandria.

The GTE case began in 1983 in Mountain View, CA. It was a case that was followed up on by the Defense Investigation Service. It was a routine background investigation of an employee at the company's facility there. It was discovered that GTE employees were obtaining classified documents from the pentagon outside of normal channels.

DIS eventually referred the matter to the Defense Criminal Investigative Service. It was suspected that the documents were being used by the company in the preparation for bids and proposals.

A similar situation was meanwhile being investigated in Cleveland, OH, in a case that was jointly investigated by DCIS and NASA. That case concerned a consultant who allegedly obtained or provided, rather, a number of companies with inside bidding information. It revealed evidence of widespread trafficking involving as many as 10 contracting companies and 30 Pentagon officials, including high-level military and civilian officials.

Officials at DCIS headquarters in Washington observed that GTE was one of those companies named in both cases. Instances of classified information were being transferred from the Pentagon to one or more contracting by a private consultant.

DCIS brought this case to the attention of the Justice Department Defense Procurement and Fraud Unit, otherwise known as DPFU.

DCIS requested a meeting with the head of DPFU. A newly organized unit within the Justice Department. That meeting was held on September 14, 1983, at the headquarters in Alexandria, VA. The purpose of the meeting was to brief the Justice Department on the findings of the joint investigation and to request that the Justice Department assign additional resources and perhaps provide surveillance.

At the time, a flowchart was provided to the head of the unit, Richard Sober. The flowchart was a matrix of the companies involved and the Pentagon employees involved and the consultants and who was supplying information to whom and where it was going.

Mr. Sober was also supplied with all the documentation from the previous cases, including the names of the Pentagon officials suspected of supplying classified materials to the consultants. There were numerous details, voluminous documents which were provided, details of which are in section III.

The Defense Department investigators continued their investigation despite the fact that it soon became apparent that DPFU and other Justice Department officials intended to limit the investigation to simply GTE.

DCIS investigators attempted to broaden the probe. Eventually, they did so, and the number of companies implicated had increased. A new flowchart was created, and the amount of contracting increased to about 25.

We were unable to obtain a copy of that flowchart. Hopefully, subsequent testimony might be able to give us an idea of where that chart is located.

According to the investigators from DCIS, Mr. Sober was not convinced that the trafficking in classified documents was a violation of Federal law. Mr. Sober was replaced as head of DPFU by Morris Silverstein, and according to investigators, Mr. Silverstein would not expand the Justice Department investigation because they were unable to assign a dollar figure to the trafficking by other consultants and contractors.

In 1985, the inspector general attempted without success to persuade the Secretary of Defense, Mr. Weinberger, to urge the Attorney General, at that time Edwin Meese, to crack down on the trafficking in classified documents.

Attorneys for GTE have argued to the Justice Department that the practice of obtaining unauthorized classified documents was so common within the defense industry that their clients should not be prosecuted.

On January 24, 1986, defense attorneys in the Zettl case argued in a hearing in the Federal District Court in Alexandria that six large defense firms had engaged in the practice of bootlegging classified documents.

On February 11, 1986, the Deputy Undersecretary of Defense for Policy's office tasked DIS with the responsibility for an investigation of companies that were mentioned in that testimony in Alexandria.

DIS had already suspected that bootlegging was a problem and had opened 18 other cases, making a total of 23 companies to be investigated by DIS. The investigation concluded May 29, 1987. A status report signed by then-Director Thomas O'Brien was sent to Craig Alderman, O'Brien's superior. The investigation found numerous instances of bootlegging, some isolated, some extensive.

It also stated that it is inconceivable that top management officials did not look the other way.

Finally, Mr. Chairman, allegations have been received that the DIS investigation was closed prematurely and that the DIS investigators were unable to develop fully the evidence that was obtained. Efforts by the staffs of you, Mr. Chairman, and Senator Grassley, to obtain copies of the investigators' summaries have been unsuccessful.

Senator **Proxmire**. Thank you.

Mr. **Kaufman**. Thank you, Mr. Chairman.

To summarize the report, Mr. Chairman, the investigation by the Pentagon investigators commenced in 1983.

Senator **Proxmire**. What month in 1983?

Mr. **Kaufman**. It was early in 1983. In approximately April of that year is when the investigation of the situation in California began. Simultaneously there was an investigation going on in Cleveland, OH, of a very similar practice. So, there were two separate Pentagon investigations under the auspices of the inspector general.

They were uncovering what appeared to them to be a widening network of companies, consultants, and Pentagon officials, some at a very high level, who were engaged in this practice of buying and selling classified documents.

They then went to the Justice Department to try to get it involved in the case, brought the evidence that they had collected to the Justice Department, and from that day through the next several years it was basically a struggle between the investigators in the Pentagon and the prosecutors in the Justice Department over the scope of the wrongdoing.

The investigators basically tried to get the Justice Department to broaden its probe to follow up leads and evidence gathered of the many contractors that they had discovered who were implicated in the practice. The Justice Department took a very narrow view, eventually and to this day have indicted only one company, which was the GTE case, which pled guilty on a plea bargain and was fined.

Now, within the Pentagon there were really two separate investigations, one under the inspector general's office, in which some 25 contractors and numerous consultants and high-level Pentagon officials were identified and described in the flowchart that Mr. Kolesnik mentioned earlier.

At the same time, another investigative agency in the Defense Department called the Defense Investigative Service, DIS, undertook a separate investigation as a result of statements made by lawyers in the GTE case to the effect that the practice of acquiring surreptitiously classified documents is so widespread and so common throughout the defense industry that their clients should not be prosecuted for it.

That provoked a separate new investigation from the Defense Investigative Service. They eventually investigated 23 companies, referred four for further criminal investigation to the inspector general's office.

These cases, so far as we know, are still being investigated by the Justice Department, and it is unknown to us what happens to the remaining cases investigated by DIS because they have refused to provide you or the staff with access to the reports summarizing those investigations.

That concludes our report, Mr. Chairman.

Senator Proxmire. Thank you very much.

[The staff report referred to follows:]

THE BLACK MARKET IN DEPARTMENT OF DEFENSE CLASSIFIED MATERIALS

A Report Prepared By
The Staff of the Joint Economic Committee
Subcommittee on National Security Economics

and

The Investigative Staff of
Senator Charles Grassley

December 21, 1988

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I. OVERVIEW

In the summer and fall of 1988, the staff of the Joint Economic Committee Subcommittee on National Security Economics and the investigative staff of Senator Charles E. Grassley conducted interviews with approximately a dozen investigative agents, all presently or formerly employed by the investigative agencies of the Department of Defense (DOD). Some but not all worked for the DOD Inspector General's office.

What follows is a summary of the interviews. At the request of the persons interviewed, their names and affiliations are being withheld.

The practices described by the investigators point to the existence of a "black market" in classified documents obtained surreptitiously by private consultants from sources in the Pentagon and sold to defense contractors for use in preparing bids and proposals. Moreover, senior officials in the Defense Department and the Justice Department were aware of the practice as early as 1983 but did not crack down.

II. PENTAGON INVESTIGATORS DISCOVER BLACK MARKET

In 1985, GTE Corporation pled guilty to unauthorized possession of a classified Defense Department planning document. Two GTE employees and a consultant were also indicted on six counts, including conspiracy to defraud and theft of government property. In March of 1988, the Justice Department dropped all counts against the two employees, and all but part of one count against the consultant. The case against the consultant, U.S. v. Zettl, is still pending before the U.S. District Court in Alexandria, Virginia.

The GTE case began in 1983 as a DOD Defense Investigative Service (DIS) background investigation of an employee at the company's facility in Mountain View, California. In the course of that investigation, it was discovered that GTE employees were obtaining classified documents from the Pentagon, outside of normal channels, through a private consultant hired by the company. The documents were not properly logged or stored in the approved system for company-controlled classified materials.

DIS referred the matter to the Defense Criminal Investigative Service (DCIS) of the DOD Inspector General's office. It was suspected that the documents were used by the company in the preparation of bids and proposals. DCIS, after further investigation, notified the U.S. Attorney's office in San Francisco.

At about the same time, another investigation of a similar situation was being conducted in Cleveland, Ohio, by a team composed of investigators from DCIS and the National Aeronautics and Space Administration (NASA). That investigation concerned a consultant who allegedly provided a number of companies with inside bidding information, obtained from NASA and Pentagon officials.

The Ohio investigation revealed evidence of widespread trafficking in classified documents, involving at least 10 contractors and 30 Pentagon officials, including high level civilian and military officials. The investigation resulted in indictments of two officials, John McCarthy, who was then Director of NASA's Lewis Research Center, and James Atchison, an Air Force employee at the Wright Patterson base in Dayton, Ohio. McCarthy pled guilty in 1983 to a charge of filing false claims in connection with travel to Washington, D. C. Atchison resigned from the government and was not brought to trial.

Officials at DCIS headquarters in Washington, D. C., observed that GTE was one of the companies named in both the California and Ohio investigations, and that the same consultant was also named in both investigations. In both instances classified information was being transferred from the Pentagon to one or more contractors by a private consultant who was being reimbursed by the contractors for his services. Some contractors had the consultant on a retainer; others paid for services rendered. It was not known by the investigators whether the Pentagon sources were paid by the consultant.

DCIS decided to coordinate what appeared to be an expanding investigation and to bring it to the attention of the Justice Department's Defense Procurement Fraud Unit (DPFU).

III. JUSTICE DEPARTMENT NARROWS THE INVESTIGATION

Because of the significance of the probe, the Director of DCIS requested a meeting with the head of the Defense Procurement Fraud Unit. The meeting took place on September 14, 1983, in the Alexandria, Virginia, office of Richard Sauber, head of DPFU. Attending the meeting were Sauber, numerous Defense Department agents from DCIS and DIS, the director of DCIS, and officials from NASA and the U.S. Attorney's Office in Cleveland.

The purpose of the meeting was to brief the Justice Department on the findings of the investigation in California and Ohio and to request that Justice assign additional resources to it.

During the briefing, DCIS agents presented Sauber with a flow chart showing which consultants were allegedly supplying which companies with information, and the suspected sources of the information. Sauber was supplied with all the documents that were uncovered by agents, including the names of the Pentagon officials suspected of supplying classified material to consultants.

Included in the details presented to Sauber were descriptions of the kind of information being bootlegged: technological specifications whose availability would allow the recipients to begin preparing immediately a proposal for a contract without having to wait for a Request for Proposal (RFP). This information might be obtained months before it became available to other firms. The information also provided such insights as the number of aircraft desired by a military service, the number of missiles to be carried on each plane, and the overall financial commitment to proposals. Different portions of this information would be swapped among different consultants, Pentagon officials, and contractors. This was described by several interviewees as "an old boy network."

Other evidence uncovered by agents and presented to Sauber included details of transactions between Pentagon sources, consultants, and contractor employees. For example, one consultant allegedly provided the secretary of a high level official with an automobile and the secretary's mother with gifts and expenses for a convention excursion, in return for classified information. This information was then passed to the clients of the consultant. The agents suspected that direct payments of bribes to higher officials may also have been involved.

At the end of the September 14 meeting, Sauber said that DPFU would go forward with the investigation. The investigators were initially encouraged, believing that the evidence uncovered in the California and Ohio investigations would be pursued and that additional investigative resources would be employed. However, it soon became apparent that the Justice Department intended to limit its investigation to the GTE case.

IV. INSPECTOR GENERAL INVESTIGATES 25 CONTRACTORS

In the months that followed, the DOD investigators continued their investigation and urged the Justice Department to broaden its probe beyond the GTE case. By

1984, the number of companies implicated had increased and one of the DCIS investigators prepared a flow chart showing the linkages between Pentagon officials, private consultants, and 25 contractors suspected of trafficking in classified documents. In the fall of 1984, the DCIS investigator discussed the flow chart with the DOD Inspector General, Joseph H. Sherick. We were unable to obtain a copy of the flow chart.

According to the investigators, Sauber was not convinced that the trafficking in classified documents was a violation of Federal law or that there was a prosecutable conspiracy to commit fraud. Several of the investigators interviewed reported that Sauber's reaction to the evidence they produced pointing to a conspiracy was, "Conspiracies are bullshit." In 1984, Sauber was replaced as head of DPFU by Maurice Silverstein. According to the investigators, Silverstein would not expand the Justice Department's investigation beyond GTE because they were unable to assign a dollar figure to the trafficking by the other consultants and contractors. Efforts by DCIS investigators to persuade higher Justice Department officials to expand the investigation were also unsuccessful.

DCIS continued its investigation in 1984 and 1985. In 1985, the Inspector General tried without success to persuade the Secretary of Defense to urge Attorney General Edwin Meese to crack down on the trafficking in classified and proprietary DOD long-range planning and budgeting documents. Sherick prepared a memo in June 1985 for Secretary Caspar Weinberger explaining that the investigators had uncovered evidence that a number of private consultants had developed sources for obtaining unauthorized copies of classified documents and that "The consultants, acting as information brokers, sell the documents to a number of major defense contractors" (see Appendix I).

The memo was sent to the DOD General Counsel, Chapman Cox, for forwarding to Weinberger, but Cox returned it with a recommendation that it not be sent.

V. DIS INVESTIGATES 23 CONTRACTORS

Attorneys for GTE had argued to the Justice Department that the practice of obtaining "unauthorized" classified documents was so common within the defense industry that their client should not be prosecuted.

On January 24, 1986, defense attorneys in the Bernie Zettl case argued at a hearing in the Federal district court in Alexandria that six large defense firms had engaged in the practice of bootlegging classified documents. Those firms were Northrup, McDonnel Douglas, T.R.W., Sanders, Boeing, and Litton. The argument was intended to show that such information "is out in the possession of contractors and on a widespread basis."

The Deputy to the DOD General Counsel was present at the hearing and reported the allegations to the Defense Secretary's office. That office then directed the Undersecretary of Defense for Policy to conduct an investigation of the allegations. On February 11, 1986, the Deputy Undersecretary's office tasked DIS with responsibility for the investigation and provided it with the names of five of the six contractors named at the court hearing.

At the time, DIS had already suspected that bootlegging was a problem and had opened 18 cases, making a total of 23 companies to be investigated. The investigation by DIS concluded May 29, 1987. A status report signed by then-director Thomas O'Brien was sent to Craig Alderman, O'Brien's superior (see Appendix II). The memo states that the DIS investigation found numerous instances of bootlegging, some isolated, some extensive. It also states that it is inconceivable that top management officials did not look the other way.

As a result of the DIS investigation, the names of four contractors (of the 23) were referred to DCIS for further investigation and eventually to the Eastern District of Virginia for prosecution by the U.S. Attorney: Sanders Associates, General Dynamics, Boeing, and Martin Marietta.

Allegations have been received that the DIS investigation was closed prematurely and that the DIS investigators were unable to develop fully evidence of possible wrongdoing by contractors other than the four who were referred to the Justice Department. Efforts by the staff and by Senators Proxmire and Grassley to obtain copies of the investigators' summaries of their investigations have been unsuccessful.

VI. SUMMARY

Beginning in 1983, investigators from the DOD Inspector General's Office uncovered a widening network of illicit trafficking in classified documents by private consultants, Pentagon military and civilian officials, and defense contractors. The Justice Department rejected requests by the investigators to follow up the numerous leads developed by the Inspector General's Office, and instead narrowed its investigation to a single contractor. By 1984, the Inspector

General's investigators suspected that 25 contractors and numerous consultants and Pentagon officials were involved in the black market in classified documents. The Justice Department's sole prosecution of GTE so far has resulted in a plea bargain in which the contractor was fined, and the dismissal of the charges against the two GTE employees.

Lawyers defending GTE alleged in 1988 that the practice of trafficking in classified documents was widespread and common within the defense industry. This allegation led to an investigation of 23 contractors by the Defense Investigative Service. DIS asserts that its investigation turned up evidence of efforts by some contractors to obtain classified documents but it is withholding the names of the contractors it investigated and the summary reports prepared by the investigators.

Thus, investigators in the Inspector General's Office turned up evidence indicating that 25 contractors were involved in trafficking in classified documents, and the Defense Investigative Service later investigated 23 other contractors suspected of the same thing. To date, one contractor has been indicted and four others are still under investigation by the Justice Department. None of the Pentagon officials who gave or sold classified material to private consultants or contractors have been identified.

APPENDIX I

OFFICE OF THE SECRETARY OF DEFENSE ✓

APR - 5 1985

Memo For Mr. Sherick

Enclosed for your review and signature is a memorandum for the Secretary addressing the need for prosecutorial support in the GTE case.

for DRFoley
B. G. Truxell
Assistant Inspector General
for Investigations

Enclosure

[illegible] Barr
this needs
[illegible]

MEMORANDUM

OFFICE OF THE GENERAL COUNSEL

June 5, 1985

NOTE FOR Mr. Cox

Attached for your signature is a memo to Mr. Sherick regarding the GTE case, per our conversaton.

Manny
Manuel Briskin
AGC(FM)

Attachment

GC-2062

GENERAL COUNSEL

6 JUN 1985

MEMO FOR Inspector General

SUBJECT: Letter to Attorney General
urging prosecution in the GTE Case

Although I understand that the Secretary may be concerned about going on record formally in this case, recent events ? indicate that we are making progress with DOJ and that we may get an indictment in July. Thus, I do not believe it necessary or desirable for the Secretary to send a letter to the Attorney General at this time. I think we should keep watching and prodding and move in with a letter next month if we need to.

If you believe the letter is still desirable now, please route it back through me so I will have an opportunity to decide whether to comment to the Secretary.

Chap
Chapman B. Cox

Joe this one is above my pay grade & I still believe that a message should be sent Dick

DEPARTMENT OF DEFENSE
INSPECTOR GENERAL
WASHINGTON, D.C. 20301

MEMORANDUM FOR SECRETARY OF DEFENSE

SUBJECT: GTE--Need for Prosecutorial Support to Halt the Unauthorized Flow of Classified and Proprietary Information--ACTION MEMORANDUM

A 2-year ongoing investigation by my staff has determined that classified Program Objective Memoranda (POMs), Program Element Descriptions (PEDs), Program Decision Memoranda (PDMs), and Five Year Defense Plans (FYDPs) have been clandestinely traded outside of the Department of Defense (DoD) official community. Specifically, a number of private consultants have developed sources for obtaining copies of these documents outside of authorized channels on a continuing basis. These consultants, acting as information brokers, sell these documents to a number of major defense contractors.

This clandestine traffic in documents has damaged the DoD's Planning, Program and Budgeting System (PPBS) and Industrial Security Program. By having access to unauthorized PPBS documents, a contractor has a competitive edge over other contractors since it can concentrate its efforts in areas known to be of future interest to DoD. It is also armed with information that leaves DoD negotiators at a disadvantage in securing an agreement at the most favorable terms to the U.S. taxpayer.

The uncontrolled availability of PPBS classified and proprietary documents prevents DoD from determining whether these documents are being used by DoD contractors for financial enhancement or, even worse, if they are being used by enemies of the United States. A classification review of two of the classified documents, retrieved by my investigators from unauthorized recipients, determined that most of the information would be of such value to hostile powers that it could not even be declassified for court use. In addition, the contractors and consultants who profit from this activity can only do so by co-opting and corrupting the Government officials who have legitimate access to these sensitive documents.

The Department of Justice, in January 1985, approved an indictment of one of these private consultants; a major contractor, GTE; as well as current and former GTE employees, for conspiracy, conversion and espionage violations. However, mid-level prosecutors have since indicated that they may veto this prosecution based upon representations by GTE that these actions

OFFICIAL USE
ONLY

did not adversely affect the DoD and that such actions were so commonplace that they were condoned by DoD. The assigned prosecutor opposes this view. The mid-level prosecutors have asked us to conduct further investigation into areas beyond the instant matter. We feel that regardless of the result of such further investigation, the instant matter requires prompt indictment action. The assigned prosecutor agrees and states that he has "no hesitancy in reasserting the viability of the proposed indictment and suggesting its presentation to the grand jury without further delay."

An indictment and prosecution in this case is essential and necessary to signal this Administration's resolve not to tolerate the illicit trafficking in classified and proprietary Government information. The indictment is also a required first step prior to seeking indictments of other individuals and entities engaged in this activity. I believe that the Attorney General must be informed of our concern and be asked to support our position by assuring that there is an appropriate prosecution in this matter.

RECOMMENDATION: That you sign the enclosed proposed letter.

Joseph H. Sherick
Inspector General

Enclosure

COORDINATION:

General Counsel

John R. Quetsch
Acting Assistant Secretary of Defense
(Comptroller)

ASD (Comptroller)

31 MAY 1985

Prepared by J. Strickler, OAIG-INV, 274-5360

APPENDIX II

Congress of the United States
JOINT ECONOMIC COMMITTEE
(CREATED PURSUANT TO SEC. 5(a) OF PUBLIC LAW 304, 79TH CONGRESS)
Washington, DC 20510

September 20, 1988

Hon. Frank C. Carlucci
Secretary of Defense
The Pentagon
Washington, D.C.

Dear Mr. Secretary:

Yesterday, Sept.19, we made a personal visit to the offices of the Defense Investigative Service. The purpose of our visit was to follow up a request for information we made more than two weeks ago. We are now deeply concerned that officials in the Department of Defense are withholding from Congress facts relating to the improper or illegal acquisition of classified and sensitive information by a large number of major defense contractors.

We previously asked the General Accounting Office to obtain certain documents from DIS needed for an oversight inquiry we are conducting into the management of defense fraud cases. The documents consist of the final investigative reports of approximately 22 investigations conducted by a special task force created by DIS in 1986, and a list of the contractors investigated. The investigations were completed and closed by early 1987.

GAO was initially told by DIS that the documents would be turned over to it. One week later, however, DIS informed GAO that the matter had been referred to the General Counsel, OSD, and that more time was needed to make a final decision.

During our meeting with Mr. John F.Donnelly, DIS Director, and members of his staff, we were told that the General Counsel's office had directed him to withhold the documents. Among the reasons cited was that the information in the reports could be used by the defense attorneys in a pending criminal case, U.S. v. Zettl.

It was explained to us that the Zettl case involves alleged illegal acquisition by a defense contractor of classified and sensitive Pentagon information. Zettl's response, in part, is that the practice is widespread and many contractors obtain such information in the same way. We were told that the Defense Department is withholding the documents we seek because they contain information that Zettl's attorneys could use to support the contention that the practice is widespread.

The statements made by Mr.Donnelly and his associates are disturbing. Two facts are implicit in the Defense Department's refusal of our request for the DIS reports. First is the indirect admission that there is information in the documents about illegal activities by defense contractors. Second is the admission that the information is being withheld because of the bearing it might have on a pending criminal prosecution. These facts reinforce our need to obtain the documents.

We were also told that the documents could not be made available because they contain information restricted by the Privacy Act. But that law does not entitle the Defense Department to deny access by Congress to the documents we have requested.

It was acknowledged in the meeting yesterday that the documents we seek are not classified and contain no grand jury information. Executive privilege has not been asserted by the President, nor should it be. There is no valid reason for continuing to withhold this information from Congress.

We ask that you direct the Defense Investigative Service to provide us and our respective staffs access to the documents we have requested.

An early response and your cooperation will be appreciated.

Sincerely,

Chuck Grassley
Charles E.Grassley
Ranking Member
Subcommittee on Courts and
Administrative Practice
Committee on the Judiciary

William Proxmire
Chairman
Subcommittee on National
Security Economics
Joint Economic Committee

DEFENSE INVESTIGATIVE SERVICE
1900 HALF ST. S.W.
WASHINGTON, D.C. 20324-1700

SEP 2 8 1988

Honorable William Proxmire
Honorable Charles E. Grassley
United States Senate
Washington, DC 20510

Dear Senators:

Your joint letter dated September 20, 1988, to the Secretary of Defense has been referred to this agency for response. Specifically, you have requested that the Defense Investigative Service (DIS) provide you and your respective staffs access to investigative files concerning allegations of improper possession and handling of classified information by certain defense contractors. These consolidated files, totaling twenty-three, have become known as the DIS Task Force cases.

In response to your request, we have attached a copy of the final report on the investigation prepared by DIS for the Deputy Under Secretary of Defense (Policy). It is dated May 29, 1987, and provides you with the necessary background on the Task Force cases and summarizes all action taken during the course of the investigations. While the report should answer any questions you may have concerning this matter, it has been redacted in order to prevent an unwarranted invasion of personal privacy where the individuals were neither indicted nor was there culpability established.

As you are aware, this agency has an obligation under the Privacy Act and Freedom of Information Act to protect information that could deprive an individual of the right of privacy, a fair trial, or an impartial adjudication. As a result, your letter places this agency in a very difficult situation. On the one hand, you are implying that this agency is engaged in the unwarranted withholding of information from Congress, while on the other, you are asking us to release information that could injure a person's character or reputation. We would hope that you and your staffs would be willing to cooperate with us to the benefit of the legislative, executive, and judicial branches.

As we indicated during our meeting with you on September 19, 1988, DIS has an administrative interest in assuring that the Industrial Security Manual was followed by industry and that proper sanctions were imposed against cleared facilities and individuals. In this regard, you were assured that DIS did not close any leads short and that all leads were followed to their logical conclusion. You were also informed that the Defense Criminal Investigative Service (DCIS), Office of Inspector General, Department of Defense, was charged with the responsibility of handling the fraud or criminal aspects of these cases and that DCIS has obtained from DIS all information contained in said files required to pursue their interests in concert with the Department of Justice.

Should additional information be desired, DIS will be pleased to arrange for a briefing limited to those closed cases unrelated to the DCIS/DOJ investigations.

Sincerely,

John F Donnelly

JOHN F. DONNELLY
Director

Attachment

file:

MAY 29 1987

MEMORANDUM FOR CRAIG ALDERMAN

SUBJECT: Investigation of Allegations Resulting from the Case of U.S. vs Bernie Zettl et al.

On February 11, 1986, we were directed by the Director, Security Plans and Programs, ODUSD(P) to investigate allegations of improper possession and handling of classified material by representatives of the Boeing Corporation, Litton AMECOM, McDonnell Douglas, Northrop and TRW. These allegations were contained in a transcript of a January 24, 1986, Hearing to quash subpoenas drafted by the defense in the Zettl case. The defense wanted to show that the holding of classified programming, planning and budgeting system (PPBS) documents is a widespread practice by industry, and that, specifically, individuals in these companies possessed unauthorized PPBS documents, which were obtained through bootleg channels.

For some time prior to this direction, I had been concerned about the amount of bootlegged material we had been finding during our inspections of cleared facilities. On October 1, 1985, we published special guidance to our personnel on this problem. When we received the direction to investigate, we were already pursuing a number of bootleg cases at DIS Headquarters. Because of the number of cases and their importance, I formed a Task Force to investigate the five companies named in the transcript as well as all other companies suspected of bootlegging. This eventually encompassed 23 companies.

The Task Force consisted of two senior people each from our Investigations and Industrial Security Directorates. Investigative teams made up of personnel security investigators and industrial security representatives from our eight regions conducted special investigations at these companies, most of which had several cleared operating locations.

DCIS was working the fraud or criminal aspects of cases involving the unauthorized possession of PPBS documents at the time the Task Force was formed. To further our common aims, we signed a memorandum of understanding with DCIS wherein both parties agreed to share information and contribute to a common data base. Also, we did not want to unduly interfere with their cases.

Our investigations have been substantially completed for some time. We are still working with DCIS and the U.S. Attorney's office on four cases involving the Boeing Company, General Dynamics Corporation, Martin Marietta Corporation and Sanders Associates, Inc. The U.S. Attorney is planning to prosecute former employee for the unauthorized possession of classified documents. He hopes that this will lead him to who might have encouraged or condoned Mr. activities and to the government employees who released documents to him. He also plans to actively pursue for unauthorized possession. Depending upon the success of these two cases, he may or may not pursue and .

Our agents will be assisting DCIS in tracing documents to their source and reconstructing what the DIS investigations have found. Because these cases now have criminal prosecution implications, we will do no further investigation.

The results of our investigations into the companies named in the transcript are as follows:

1. Boeing Company -

2. Litton Systems, Inc., AMECOM Division - We had discovered an unauthorized document in Litton prior to the transcript. The individual who brought the document into the facility stated he could not remember where he obtained it. We conducted a post-adjudicative investigation on the individual and forwarded his case to DISCR. DISCR continued his clearance. Our investigation found no other evidence of unauthorized documents nor any complicity by Litton officials.

3. McDonnell Douglas Corporation - Our investigation turned up no evidence of a McDonnell Douglas practice of procuring unauthorized PPBS documents. We did find one instance of the improper exchange of a classified document containing technical programmatic information between the Navy and an employee in a McDonnell Douglas office in the Washington, D.C. area. This document was sent out of channels to McDonnell Douglas in St. Louis where it was subsequently mishandled by three other employees. We have opened post-adjudicative investigations on these four individuals. The transcript mentioned a former employee of McDonnell Douglas who is suing them claiming he was forced out of a job at McDonnell Douglas because he wouldn't perjure himself in civil litigation between McDonnell Douglas and Northrop concerning the practice of having classified DoD documents. This former employee will not talk to us about his allegation concerning security at McDonnell Douglas. We have indications the employee may talk about improper security practices at McDonnell Douglas during the trial, which we plan to monitor.

4. Northrop Corporation - We found no evidence of Northrop involvement in the procurement or possessing of unauthorized PPBS documents. At the time of the transcript, we were inquiring into Northrop's possession of some classified PPBS documents. However, our subsequent investigation revealed that Northrop had obtained the documents from the Triservice Industrial Information Center.

5. TRW, Inc. - The transcript contains information that

The FBI had exonerated TRW, as a result of the FBI investigation of conducted an internal investigation, which resulted in disciplinary actions against 14 employees. We could not, however, substantiate TRW's findings. Our interviews and records checking turned up no evidence of the procuring or possession of unauthorized documents by TRW.

The results of investigations into the three companies, which in addition to Boeing, the U.S. Attorney may want to prosecute are as follows:

1. Sanders Associates, Inc. -

2. General Dynamics Corporation -

3. Martin Marietta Corporation -

In the other 15 cases, we found isolated instances of contractor employees possessing unauthorized classified material. Of the 16 contractor employees that we identified as being involved, 4 were fired, we opened post-adjudicative investigations on 11 and suspended the clearance of one. In one of the cases, Rockwell International Corporation, the Army officer who released an unauthorized document to a Rockwell employee and the Rockwell employee have been indicted for theft and conspiracy. Their trial begins July 13, 1987.

Recommendations:

1. We have forwarded two proposed Industrial Security Manual changes to ODUSD(P). These changes will require contractors to identify the individual who releases documents to be hand-carried into a facility, to pinpoint the office from which documents were released and to maintain copies of receipts for documents received by the facility. Equally guilty as the contractor who possesses unauthorized documents is the government official who releases the documents to the contractor. These changes should aid us in identifying the releaser as well as cause a potential releaser to be more reluctant to provide documents to a contractor. Copies of these changes are provided at Attachment 1.

2. Many PPBS documents are readily available from the Triservice Industrial Information Center for those contractors whose need-to-know has been certified by a contracting officer. Because of this availability, many contractors are genuinely confused as to what documents are authorized or unauthorized. Moreover, there is some concern that in some cases contracting

officers approve requests beyond a contractor's need-to-know. We previously recommended to your office that the internal controls at Triservice be audited. An audit, we believe, will provide a basis for strengthening access controls at Triservice. A copy of our previous recommendation is at Attachment 2.

3. We were hampered in our investigations by the refusal of some cleared contractor personnel to furnish us information; information that could have perhaps enabled us to learn the identity of government employees who released unauthorized documents or if contractor top management officials were involved. We believe that it is not in the national interest to allow an individual to continue to have access to classified information while withholding information essential to resolution of an issue of investigative concern. We have previously requested that DIS be given the authority to administratively terminate the clearances of individuals who refuse to cooperate. We think that this authority is absolutely necessary if we are to resolve issues such as bootlegging. A copy of our proposed Industrial Security Regulation change which would give us this authority is at Attachment 3.

4. Procedures in the Industrial Security and Information Security Program Regulations are sufficient to prevent unauthorized release, if followed. We recommend that all DoD activities that have classified involvement with industry be periodically audited to assure that these regulations are being followed.

Conclusion. It is apparent from our investigations and from investigations conducted by DCIS that there have been efforts by industry, primarily marketing people and consultants, to obtain classified PPBS documents; and while we could not find evidence of top management officials directing that the documents be obtained or condoning the practice, it seems inconceivable that management did not look the other way in some instances. It is equally apparent that the publicity from the Zettl case and from our investigations that this practice has ceased. This is not to say, however, that there will not be isolated incidents from time to time, nor can we discount the possibility that once today's climate has ended that the practice will not begin anew. We are issuing updated inspection guidance based on our experience with these investigations. I believe that the combination of this guidance and the adoption of the above recommendations will effectively prevent the practice of obtaining unauthorized classified PPBS documents from ever again becoming a major problem.

SIGNED

THOMAS J. O'BRIEN
Director

Attachments

Senator PROXMIRE. We will now hear from the witnesses.

The first witness will be Donald Mancuso, Assistant Inspector General for Investigations in the Pentagon's Inspector General's Office, accompanied by Sam Maxey, special agent; and Robert Segal, former investigator, Office of the Inspector General, Department of Defense.

Is he here?

You are Mr. Segal? Fine. All right.

We will start off with Mr. Mancuso then, and we will move along.

STATEMENT OF DONALD MANCUSO, ASSISTANT INSPECTOR GENERAL FOR INVESTIGATIONS, OFFICE OF THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE, ACCOMPANIED BY SAM MAXEY, SPECIAL AGENT

Mr. MANCUSO. Good morning, Mr. Chairman and Senator Grassley. I am pleased to be here today to contribute to your review of what is an important issue of bootlegging and trafficking in classified and internal Defense Department information by consultants and contractors.

As requested, I have with me today Special Agent Maxey to answer any specific questions regarding certain closed investigations as they relate to this issue.

The Defense Department Inspector General shares your concern over the impact that trafficking of classified and internal DOD information has on the procurement process. The disclosures earlier this year of investigations into the apparent misuse of internal information and the alleged bribery of Government officials are of concern to us all.

I can assure you from firsthand information that the Department of Defense has supported the need for a thorough investigation of the specific matters identified as well as practices and policies under which these incidents occurred.

The Naval Investigative Service has devoted over 30 agents to the Ill Wind probe, while my own office also has agents assigned to portions of the investigation. The investigation is both far reaching and complex and, clearly, it will be some time before enough information is on hand for us to assess the full impact of these abuses on the procurement process and what actions will be necessary to correct these abuses.

As this subcommittee may be aware, Secretary of Defense Carlucci has established a task force under the direction of the Under Secretary of Defense for Acquisition and the general counsel, which has already taken steps to protect the Department against this form of abuse.

Unfortunately, we believe that trafficking in internal defense documents is not a new phenomenon. As you know, the Defense Criminal Investigative Service, my organization, which is the investigative arm of the Defense IG's office, was responsible for the first successful investigation of this type of crime, and we are involved in investigating these matters to this day.

As a result of our work, in September 1985, GTE, Government Systems Corp., pled guilty to a criminal information, charging the company with illegally conspiring to obtain Defense Department classified and proprietary information relating to future procurements by the Department of Defense.

Also, at that time, Bernie Zettl, a GTE consultant, was criminally charged. Mr. Zettl is now awaiting trial, pending a second pretrial appeal, under the Classified Information Procedures Act. For this reason, the GTE-Zettl case is still considered to be an open matter, precluding me from discussing this case in any great detail.

As a result of information developed during the GTE investigation, an investigative task force was formed. Mr. Maxey, then assigned as a special agent in our Washington field office, was put in charge of this task force and directed all investigative efforts in this matter.

The task force included agents from my office, the Naval Investigative Service, the FBI, and the Defense Investigative Service.

As previously related to you in our correspondence in August, we investigated seven cases with similar allegations to the GTE-Zettl investigation. Four of the cases have been closed, and descriptive summaries were provided to your staff. The remaining cases, including the GTE-Zettl case, are currently open in the Eastern District of Virginia and are being reviewed by the Department of Justice.

I applaud the subcommittee's initiative in seeking ways to improve our acquisition process. We realize that the Department of Defense cannot unilaterally solve problems such as the misuse of competitive proprietary data and conflicts of interest among consultants.

There are, however, several actions which the Defense Department task force has taken in response to the Ill Wind probe. These actions include: requiring contractors who have been publicly identified with Ill Wind to submit certificates stating that their bids have not been tainted by information derived from sources not available to the general public and other bidders.

The Department has also instituted a clause in all contracts which will allow us to recover any profits gained through the use of illegally obtained information.

The Department of Defense Acquisition Regulation Counsel is currently writing a new cost principle which will further restrict the ability of defense contractors to bill the Government for consulting costs.

These rules will help to ensure that consultants that incur costs such as entertainment, lobbying, defense of fraud, and others which are otherwise unallowable, will not be paid through a consultant contractual agreement.

Additionally, proactive efforts have been undertaken by our office to include such things as the use of fraud and integrity briefings and special-access program briefings. These training sessions are regularly given by our agent staff to defense procurement personnel and are designed to highlight the need to abide by the standards of conduct and to report irregular matters to appropriate authorities.

We in the IG's office share your outrage at such crimes as bribery of public officials and trafficking in internal information and agree that more needs to be done to better monitor and control the use of consultants by both the Government and industry.

The Department's recent statement backing the need for a system requiring registration of consultants is certainly a step in the right direction. Hopefully, the lessons learned from our past investigations as well as the ongoing Ill Wind matter will ultimately result in constructive and lasting management improvements.

I wish to emphasize that the insidious problem, which is the basis for this hearing, has a twofold detrimental effect. First, it corrupts the procurement process and undermines public confidence in the Defense Department's ability to manage its funds.

Second, and I believe more importantly, the unauthorized brokering of classified information, often involving leading-edge technologies, presents a significant risk to national security. While industry consultants are usually the conduit, defense employees who provide this information for personal gain represent the most culpable people involved. There is not a one of them who doesn't know, when they take information out of the Pentagon or from some other office where it is under strict control, that their actions are strictly forbidden.

The Department of Defense has never been more effective than it is today in detecting and aggressively investigating procurement fraud. For example, although some of the wrongdoers in Ill Wind were high-level Defense Department officials who used their positions to circumvent the internal controls that are involved, they were, in fact, found out.

The catalyst for a good portion of the Ill Wind probe was the result of an ex-DOD employee who had received a fraud awareness briefing and had realized that there was certain information that he should turn over, which that person did, to the Naval Investigative Service.

As I have stated, this sort of training is one of the many tools brought into much wider use by the inspector general's office in recent years to combat fraud, waste, and abuse.

In your letter inviting us to appear, you expressed your interest in the capability of the Defense Department and the Justice Department to deal with this type of investigation. In October 1985, during testimony before the Senate Subcommittee on Administrative Practice and Procedure of the Committee on the Judiciary, Mr. Joseph Sherick, then the inspector general of DOD, commented strongly on the need for more prosecutive resources to be dedicated to defense procurement fraud.

Having reviewed the situation as it existed at the time, I certainly agree with Mr. Sherick's position. Much has changed, however, since that time. The support received has improved dramatically, and I am pleased with the overall support furnished by the Justice Department. There is no doubt that both the Defense and Justice Departments have made strong commitments to the pursuit of all forms of defense fraud.

In a related area, the DOD IG recognizes and appreciates your efforts and those of Senator Grassley to increase resources devoted to defense fraud through your support of the Major Fraud Act. This act authorized additional funding for attorneys specifically designated to prosecute major fraud against the Federal Government.

In summary, we will continue to vigorously pursue this and all forms of criminal activity relating to defense programs and will continue to work with the Defense Investigative Service and the Justice Department to ensure that this country's classified and proprietary data is properly protected from unauthorized disclosure.

That concludes my statement.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Mancuso follows:]

PREPARED STATEMENT OF DONALD MANCUSO

Mr. Chairman, Members of the Subcommittee, I am pleased to be here today to contribute to your review of what is an important issue of bootlegging and trafficking in classified and internal Defense Department information by consultants and contractors. As requested, I have with me today Special Agent Sam Maxey to answer any specific questions regarding certain closed investigations as they relate to this issue. The Department of Defense Inspector General shares your concern over the impact that trafficking of classified and internal DoD information has on the procurement process. The very nature of this trafficking undermines the foundation of an honest and competitive procurement process.

The disclosures earlier this year of investigations into the apparent misuse of internal information and the alleged bribery of government officials are of concern to all of us. I can assure you, from first hand observation, that the Department of Defense has supported the need for a thorough investigation of the specific matters identified as well as practices and policies under which these incidents occurred. The Naval Investigative Service has devoted over 30 agents to the Ill Wind probe, while my own office also has agents assigned to portions of the investigation. The investigation is both far-reaching and complex and, clearly, it will be some time before enough information is on hand for us to assess the full impact of these abuses on the Defense procurement process and what actions will be necessary to correct these abuses. As this Subcommittee may be aware, Secretary of Defense Carlucci has established a task force under the direction of the Assistant Secretary of Defense (Acquisition) and the General Counsel which has already taken steps to protect the Department of Defense against this form of abuse.

Unfortunately, we believe that trafficking in internal Department of Defense documents is not a new phenomena. As you know, the Defense Criminal Investigative Service (which is the investigative arm of the Inspector General's office) was responsible for the first successful prosecution of this type of crime and we are continuing to pursue similar matters today. We initially became involved in investigating the trafficking of classified and internal Defense Department information shortly after our formation in 1981. As a result of our work, in September 1985, the GTE Government Systems Corporation (GTE) plead guilty to a criminal information charging the company with illegally conspiring to obtain Department of Defense classified and proprietary information relating to future procurements by the Department of Defense. Also, at that time, Bernie Zettl, a GTE consultant, was criminally charged. Mr. Zettl is now awaiting trial pending a second pretrial appeal under the Classified Information Procedures Act. For this reason, the GTE/Zettl case is still considered an open investigation, precluding me from discussing this case in any detail.

As a result of information developed during the GTE investigation, a DoD task force was formed. Mr. Sam Maxey, then assigned as a Special Agent in our Washington Field Office, was put in charge of the task force and directed all investigative efforts in this matter. The task force included agents from my office, the Naval Investigative Service, the Federal Bureau of Investigation and the Defense Investigative Service. As previously related to you in our correspondence of August 24, 1988, we investigated seven cases with similar allegations to the GTE/Zettl investigation. Four of the cases have been closed and descriptive summaries were provided to your staff. The remaining cases, including the GTE/Zettl investigation, are currently open in the Eastern District of Virginia and are being pursued by the Department of Justice. Disclosure of specific details of those open investigations at this time could jeopardize our investigative efforts and, in the Zettl case, impact ongoing litigation.

I applaud this Subcommittee's initiative in seeking ways to improve our acquisition process. We realize that the Department of Defense cannot unilaterally solve problems such as the misuse of competitive proprietary data and conflicts of interest among consultants. There are several actions which the Department of Defense task force has taken in response to the Ill Wind allegations. These actions include requiring contractors who have been publicly identified with the Ill Wind investigation to submit certificates stating that their bids have not been tainted by information derived from sources other than those available to all bidders or information that is not generally available to the public. The Department has also instituted a clause in all contracts which will allow us to recover any profits gained through the use of illegally obtained information. The Department of Defense Acquisition Regulation Council is currently writing a new cost principle or rule which will further restrict the ability of Defense contractors to bill the Government for consulting costs. These rules will help to ensure that consultants that incur costs such as entertainment costs, lobbying costs, defense of fraud, and others which are otherwise unallowable, are not paid through a consultant contractual arrangement.

Additionally, proactive efforts have been undertaken by our office to include such things as the use of fraud and integrity briefings and special access program briefings. These training sessions are regularly given by our agent staff to Department of Defense procurement personnel and are designed to highlight the need to abide by the standards of conduct and to report irregular matters to appropriate authorities.

We in the Office of Inspector General share Congress' outrage at such crimes as bribery of public officials and trafficking of internal information and agree that more needs to be done to better monitor and control the use of consultants by both the Government and industry. The recent policy statement by Deputy Assistant Secretary of Defense for Procurement backing the need for a system requiring registration of consultants is certainly a step in the right direction. Hopefully, the lessons learned from our past investigations and the Ill Wind revelations will ultimately result in constructive, lasting management improvements.

I wish to emphasize that the insidious problem which is the basis for this hearing has a two-fold detrimental effect: first it corrupts the DoD procurement process and undermines public confidence in the Department's ability to manage its funds; secondly, and perhaps more importantly, the unauthorized brokering of classified information, often involving leading edge Defense technology, presents a significant risk to national security. While industry consultants are usually the conduit, Defense employees who provide such material for personal gain, represent the most culpable parties. There is not a one of them who does not clearly understand that when they pass classified material to unauthorized parties that their actions are strictly forbidden.

The Department of Defense has never been more effective than it is today in detecting and aggressively investigating procurement fraud. For example, although some of the alleged wrongdoers in the Ill Wind probe were high ranking Department of Defense officials, who used their positions to circumvent internal controls, they were, in fact, found out. The catalyst in one key portion of the case was an ex-DoD employee who had been given a fraud awareness briefing. As I have stated, such training is one of the many tools brought into much wider use by the Department of Defense Inspector General in recent years to combat fraud, waste and abuse.

In your letter inviting us to appear, you expressed your interest in the capabilities of the Defense Department and the Justice Department to deal with this type of investigation. In October 1985, during testimony before the Senate Subcommittee on Administrative Practice and Procedure of the Committee on the Judiciary, Mr. Joseph Sherick, then the Inspector General, DoD, commented on the need for more prosecutive resources to be dedicated to defense procurement fraud. Having reviewed the situation at that time, I certainly agree with Mr. Sherick's position. Much has changed, however, since that time. The support received has improved dramatically and I am generally pleased with the overall support furnished by the Justice Department. There is no doubt that both Department of Defense and Department of Justice have made strong commitments towards the pursuit of all forms of defense fraud.

In a related area, the Department of Defense Inspector General recognizes and appreciates your efforts and those of Senator Grassley to increase resources devoted to defense fraud through your support of the Major Fraud Act. This act authorized additional funding for attorneys specifically designated to prosecute major fraud against the Federal government. The Inspector General has recently written to the Department of Justice offering our assistance in identifying the locations for the additional prosecutive support.

In summary, we will continue to vigorously pursue this and all forms of criminal activity relating to Department of Defense programs and will continue to work with the Defense Investigative Service and the Department of Justice to ensure that this country's classified and proprietary data is properly protected from unauthorized disclosure.

I will be pleased to answer questions posed by the Committee.

Senator **Proxmire**. Thank you, Mr. Mancuso.

Mr. Segal, you were formerly with the Pentagon inspector general's office, and you have left that office, and you served 1983, 1984, and 1985.

Mr. **Segal**. October 1983 to January 1985.

Senator **Proxmire**. All right, sir. Go right ahead.

STATEMENT OF ROBERT L. SEGAL, FORMER INVESTIGATOR, OFFICE OF THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

Mr. **Segal**. I appreciate the opportunity to appear here. It has been 3 years since my previous appearance before Senator Grassley's subcommittee. In that time, a lot has happened, and nothing has happened.

At the outset of that first appearance, a representative from the Justice Department nearly assaulted me as she very effectively terminated my testimony before it had hardly begun. According to her, my testimony would have destroyed the Government's case against three people then on trial in Alexandria, VA, on charges deriving from the so-called GTE case.

The intervening 3 years have demonstrated conclusively that Justice was quite capable of destroying that case itself without any help from me whatsoever.

Soon after my ill-fated subcommittee appearance, Mr. Steven Trott, now, incredibly, a Federal judge, then a high muckety-muck at Justice, slandered me in a national news magazine. Said Mr. Trott of my ability as an investigator, "Mr. Segal wouldn't know a good case if it come up and bit him." The magazine editor judiciously left out the part of my anatomy to which Mr. Trott was referring.

As you might imagine, I was offended by Mr. Trott's comments and even explored legal action, only to find out that Government officials can say with impunity just about whatever they so desire about whomever they choose.

Over the past 3 years I have watched as a spectator as Justice destroyed what was a classic conspiracy case with far-reaching consequences and implications for this country's national security.

Then came June 1988 and the revelations of the FBI case about scandal at the Pentagon. On June 20, Senator Grassley, without my knowledge, read on the floor of the Senate my 3-year-old prepared statement from my 1985 aborted testimony before his subcommittee. Suddenly, everyone in the media was trying to contact me. The deluge was such that on June 21 I held a joint press conference with Senator Grassley.

The evening of that same day, I was thrust further into the limelight with an appearance on "Nightline" with Ted Koppel. Since then, I have returned to obscurity, only to be called again today to appear before your subcommittee.

I cannot say that the attention that I have received has not been flattering. However, to date, it seems that I have not had much of an impact upon the subject at hand.

The free trading of highly classified U.S. Government documents by Government officials, so-called consultants, and the companies that they represent, and the inability or lack of desire of the Justice Department and other Government agencies to properly investigate those grossly illegal activities.

My frustration and confusion regarding this subject can be illustrated with a quick reference to the highly visable investigations and prosecutions of Lieutenant Colonel North and Admiral Poindexter in the so-called Iran contra scandal. As I understand those prosecutions, both North and Poindexter have been charged with violation of 18 U.S.C. 371, conspiracy to defraud the U.S. Government, the very same charge brought in the GTE case.

These two unassociated cases can be brought together to illustrate what to me should be a major issue before this subcommittee.

Regardless of one's personal opinion concerning the ongoing prosecutions of North and Poindexter, regardless of whether or not North and Poindexter are proven guilty of the charges against them, I doubt that there was anyone on either side of those prosecutions, including the special prosecutor himself, who believes for a moment that North and Poindexter intentionally violated any laws for personal gain.

I do not believe there is any doubt whatsoever that both North and Poindexter were motivated with a desire to serve their country. Yet, extraordinary efforts and moneys have been expended to prosecute these two men.

On the other hand, the GTE Corp., charged under the same conspiracy statute, pleads guilty to conspiring to defraud the U.S. Government for clear personal gain, a conspiracy involving the unauthorized possession and trafficking of highly classified Government documents, pays a half-million-dollar fine, and then, just a few days following its guilty plea, is awarded a multimillion-dollar defense contract.

Clearly, something is not right. Of the three charged individuals in the GTE case, two have had charges dropped. The third faces what amounts to a loitering violation.

During my short tenure with the DOD IG office, the GTE case resulted in the most severe punishment handed out. For whatever motivation, there has been a clear lack of any apparent serious desire by any high-level Government official outside the Congress to pursue investigation and prosecution of what evidence clearly indicated could be pervasive activity which both defrauds the U.S. Government financially and presents a serious threat to its security.

It seems that where there is a clear political advantage to be gained, as in the North-Poindexter cases, there are no limits in the efforts to secure justice, but where Government officials might have to take an unpopular or controversial position against large U.S. companies with financial and political clout, little serious effort is made to diligently pursue such cases.

In fact, officials such as Mr. Trott seem more interested in attacking their own investigators rather than rigorously pursuing evidence indicating major procurement and security problems running rampant throughout the defense and other Government-related industries.

Gentlemen, I hope that this subcommittee will seriously consider the points I have raised above. Like so many of my fellow citizens, I remain skeptical about this Government's ability to rise above political considerations and take effective bilateral action to correct serious problems facing us all. I hope the actions you take in this matter now before you prove me wrong.

Thank you.

Senator **Proximire**. Thank you, Mr. Segal.

Mr. Maxey, do you have a statement you would like to make?

Mr. **Maxey**. Mr. Chairman, I have no prepared statement, but I am prepared to answer any questions you may have on closed cases.

Senator **Proxmire**. All right, sir. Fine.

Let me ask you first, Mr. Segal, you heard the staff present a report summarizing the role of the inspector general's office in the investigation, what we are calling the black market in classified documents.

First, does the report, in your view, accurately summarize the facts? And second, will you briefly explain your role in the investigation, what you did, what evidence you have so far?

Mr. **Segal**. Yes, sir. In answer to the first question, yes, it does.

When I joined DCIS in October of 1983, I was assigned to a headquarters position. My primary function was to oversee all DCIS cases which were referred to the procurement fraud unit, the special prosecutor's unit set up to prosecute what we considered important investigations.

I was not involved in the beginnings or the commencement of the GTE case, as it is so called today. However, as the case evolved, my supervisor, aware of some talent that I have in the conspiracy area—I had 12 years as a drug enforcement investigator before that, much of which was spent putting together conspiracy cases—asked me to take over the investigation, which I did.

I think it was somewhere in either late spring or early summer of 1984 I assumed supervision of that investigation. The supervision included myself and Mr. Maxey, and eventually one other agent was assigned to the group.

Very simply, Mr. Chairman, our investigation uncovered and enormous amount of information, not just about GTE. It has been called the GTE case. There is a tendency to focus on it as if it were the lead culprit out there. That was not the case whatsoever. GTE was one of many, many companies that surfaced in our investigation. It was, from my perspective, to be the lead prosecution and from it would grow out a lot of other subsequent prosecutions.

In fact, GTE, it didn't have to start with GTE, let me put it that way. We had strong evidence against several other companies which we could have indicted to begin with.

What we hoped to have happen was to have successful prosecution and thereby try to encourage some of the people involved, both the individuals and the companies to choose to participate in the investigation rather than to be our adversaries.

That, of course, never occurred.

Senator **Proxmire**. What led you to believe that 25 contractors were involved?

Mr. **Segal**. It was the evidence we uncovered, sir. It's not a supposition on my part. We have hard factual evidence trying in——

Senator **Proxmire**. What kind of evidence?

Mr. **Segal**. Testimony from witnesses, and there was documentary evidence.

There is an immense amount of evidence, Mr. Chairman, that is grand jury material, which prohibits me or any of the other gentlemen here from discussing it in detail.

All I can tell you is that the evidence, any person with any investigative capability, any prosecutor with any prosecutive talent, who saw that evidence in front of them would have been very, very excited about having been assigned to that case.

Senator **Proxmire**. Can you explain how it could be that GTE pleaded guilty—and they had to get that information from Defense Department employees—and not one single Defense Department employee has been identified?

Mr. **Segal**. I cannot explain that, sir.

Senator **Proxmire**. Is it true that that was the only way they could get it?

Mr. **Segal**. I am not sure I understant your question. You mean the Justice Department getting that information?

Senator **Proxmire**. GTE getting the information.

Mr. **Segal**. Yes, sir.

Senator **Proxmire**. So, they had to get the information. There must have been some Defense Department people implicated. Is there any evidence that anybody had been disciplined over there or fined?

Mr. **Segal**. Not that I know of, sir.

Senator **Proxmire**. Certainly not prosecuted.

Mr. **Segal**. No, sir.

Senator **Proxmire**. Can you give us any idea of how much money might be involved in this situation? You're saying that this classified information was actually sold. That's what made it a black market.

Mr. **Segal**. Yes, sir.

Senator **Proxmire**. Bought and sold. You also say that some 25 firms could be involved in this. Could you give some notion, is this millions of dollars, hundreds of thousands of dollars? How much money was involved in the exchange?

Mr. **Segal**. In one particular instance, sir, we had a paper flow—and it still exists, I assume, somewhere—that showed literally tens of thousands of dollars running to just one consultant who was consulting to a number of these companies. Very simply, he was being paid to do what legitimately I cannot demonstrate, but what the man was doing was obtaining documents, he was obtaining the entire 5-year plan——

Senator **Proxmire**. I am talking about money that was flowing to employees in the Pentagon, people employed by the Federal Government.

Mr. **Segal**. The evidence we have, Senator, showed money flowing in that direction. We had not tied it down at the time that I left the investigation.

And it was at that point that we ran into some incredible obstacles—at least incredible to me—both within Justice and within DOD.

Senator **Proxmire**. What kind of obstacles?

Mr. **Segal**. To give you an idea, we fully briefed Mr. Sherick, the inspector general, of the scope and the context. That't the first time that I heard about that memo that Senator Grassley read, but apparently he referred it to the Secretary of Defense.

We also briefed the FBI in Alexandria.

There were political people mentioned in the evidence—and I say mentioned; people can jump to great conclusions here—there was circumstantial evidence which indicated the involvement of both military officers and Members of Congress in our investigation.

However, we had no solid information to tie them down. We were in the process of pursuing that, but to do that we needed physical assets, legal assets such as subpoenas, things of that nature.

Mr. Maxey and I constituted the entire investigative team. I understand the FBI has a few more people assigned to what they are doing now.

That is, we did not have the capability to pursue the many, many leads that were open to us. We had to just take the one in hand and put off what we had till down the road. We did not get the support. I asked for it on many occasions.

Mr. Mancuso mentioned the task force here which was formed. We requested a task force of at least 10 special agents long before I ever left DCIS, and it was never forthcoming.

Senator **Proxmire**. Let me ask Mr. Mancuso, Mr. Maxey.

This is a scandal that started—at least, you first knew about it in 1983; it might have started before that, is that right?

Mr. **Mancuso**. You are associating the current scandal with that?

Senator **Proxmire**. I am talking about this wholesale trafficking in classified information.

Mr. **Mancuso**. Certainly, Senator. We first became aware of it in 1983, but I have no reason to doubt that it was going on for some time before that.

Senator **Proxmire**. Let me ask you, what is your judgment about whether it's going on now?

Mr. **Mancuso**. Sure. I would say absolutely it is going on now.

Senator **Proxmire**. It is going on now, and it's going to continue going on?

Mr. **Mancuso**. That would be my belief, yes, Senator.

Senator **Proxmire**. Could you give us your best judgment on what this means in terms of money changing hands?

Mr. **Mancuso**. It would be difficult to quantify, but I would agree with Mr. Segal that almost certainly it would be in at least the tens of thousands of dollars that individuals have gained in different transactions.

Senator **Proxmire**. That seems, in view of the immensity that is involved here—26 companies, the enormous value of defense contracts, I would be surprised if it were tens of thousands. I would be surprised if it weren't hundreds of thousands of dollars. It wouldn't surprise me if it were millions of dollars.

Doesn't that seem fairly reasonable in view of the enormous value of having an unfair advantage in a bid for these very expensive billion-dollar contracts?

Mr. **Mancuso**. I would agree with you. But again, to quantify, my subjective opinion, I agree with you that it could well be in the millions of dollars and certainly the information may well be worth that much money. But I have no way of quantifying how much money may have changed hands.

Senator **Proxmire**. Mr. Maxey.

Mr. **Maxey**. To the consultants in general, they were hired on a long-term contract basis and paid a monthly fee. So, over the course of their contract they might receive hundreds of thousands of dollars.

Senator **Proxmire**. Mr. Segal, how many investigators worked with you while you were involved in this investigation? And did they agree with you that a large number of companies were involved?

Mr. **Segal**. Really, it was Mr. Maxey and myself, and then we had one additional.

Senator **Proxmire**. Let me ask, Mr. Maxey, at this point, do you agree with the testimony of Mr. Segal that there were a large number of companies involved?

Mr. **Maxey**. Yes, Mr. Chairman.

Senator **Proxmire**. Go ahead.

Mr. **Segal**. As I say, you're looking at the team, really. We were the only two people who were assigned to that case. It warranted greater attention.

Senator **Proxmire**. Let me ask about that. Why were there only two? I have great respect for both of you. You are both obviously very good people. But this is a very, very serious matter. Why were only two investigators assigned to it?

Mr. **Segal**. I don't know the answer to that, Senator.

Senator **Proxmire**. Could you have used more assistance?

Mr. **Segal**. Yes, sir. And my supervisor wanted to get us that. But the DCIS made the determination, for whatever reasons, not to assign the personnel.

Now, we are not the only cases they were working on. I mean, DCIS has an enormous volume of cases to work on. But there should have been more assigned.

Senator, you asked me to define types of obstacles. One of them which might really cut to the quick on this, when we uncovered the fact that these classified documents were being circulated, we obtained one through a grand jury process. That is, we are not guessing they were classified, we know they were classified. And the one document—this is not the document—it comes in boxes. I mean, there are enormous numbers of pages to it.

But on some of the documents we sent over to the Pentagon for analysis, and as Senator Grassley indicated, we were told that these were documents containing information that would never be downgraded—that is, never declassified. I took this to the prosecutor.

Senator **Proxmire**. Never be declassified?

Mr. **Segal**. Never be declassified. Yes, sir.

I took these documents and this issue to the prosecutor who was in charge of the case, one of Mr. Sober's people, and said, "There must be some espionage violation here somewhere," and was told point-blank, "It doesn't exist. You can't do it. You can't charge it."

I had to go into title 18 and just read the espionage statute, which is clear what we were investigating was a clear violation of the espionage statute. Yet, it took forever to get the Justice Department to agree to pursue this matter.

In fact, it was long after I left DCIS—Mr. Maxey was in charge of the case then—that the Justice Department finally agreed to at least proceed on the espionage charge.

The whole idea, Senator, was simply this. Can you imagine a major U.S. Government contractor finding itself being charged with violation of espionage? It was not my objective to charge them with that, to take them into court, et cetera. The whole idea is to use leverage against these people to obtain their cooperation.

That is, a good investigation-prosecution team will use all the leverage it can. There is no doubt in my mind that most Government contractors would be delighted to cooperate with the Government rather than defend an espionage charge in open court. That is where I was trying to take this case. The Justice Department wanted no part of it.

Senator PROXMIRE. Senator Grassley.

Senator GRASSLEY. Thank you, Mr. Chairman.

Mr. Mancuso, first of all, I want to say that we appreciate your testimony and your cooperation in providing Mr. Maxey as a witness. Many of us in Congress are supportive of your efforts. We urge you, of course, to maintain a very aggressive approach in combating defense fraud.

I think it's fair to say, remember out there at the grassroots you have 240 million people who are on your side, and you've only a few hundred people who don't want you to succeed.

In your comment, Senator Proxmire, you just substantiated my suspicion that trafficking is still going on. So, I guess a very basic question is what should be done about it and who should do it?

Mr. MANCUSCO. Senator, I think that ties in a little bit with the question passed to Mr. Segal on resources. What happened in 1983 or 1984—and I am not here to make a plea for resources—we have a defined investigative mission, as you know; we've done some work with your staff. Product substitution is our No. 1 concern. We are concerned about safety issues with the troops.

At any given time, for instance, right now, we have over 1,100 ongoing investigations. We have 300 agents, 1,100 investigations.

There was a lesser proportion at that time. Fewer agents, some fewer number of cases. We view bootlegging as somewhat of a priority because it touched on the integrity of the procurement process. It wasn't a safety issue, but it was an integrity of the process that we were concerned about. Yet, at the time our resources were very limited, and just the fact that we could put two agents on one case at that time was exceptional. There were very few other investigations that had the advantage of having more than one full-time investigator.

Our job, as we view it within the IG, is certainly to protect DOD from any type of violation involving the procurement process or anything that impacts on our programs. However, there are agencies, including the DIS, that are very much involved within the leakage or turning over of classified documents, and it would certainly include the Federal Bureau of Investigation.

When you say, "What can we do?" We within DOD as a whole, as a Department, there is much that can be done, and I touched on some of those things in my testimony, some internal controls that can be put in effect, more detailed monitoring of the activities and the consultants—who is involved, who is working for who, and finding out are they working also for other contractors and for the Defense Department?

But a large part of the answer as far as investigating these things, is a team effort. I think Mr. Segal and Mr. Maxey have said that. It's a team effort that is needed. I think Ill Wind right now has that effort. You may argue "too little too late," but there is that effort out there, several investigative agencies working together with the Justice Department, and to my knowledge, getting the support from each of those agencies in trying to come to an answer to this.

Senator GRASSLEY. Mr. Chairman, I am aware of the time constraints. So, feel free when my 10 minutes are up for me to refer back to you.

Mr. Segal, in your view as the lead agency for the DCIS investigation into this trafficking in documents, why was the investigation not expanded to the other number of companies?

Mr. SEGAL. We are getting into subject judgments, which is what you're asking me for. Let me say what I don't think it was. I don't think it was a matter of corruption, which is what a lot of people tend to lean toward. I think it's a political process and a bureaucratic process.

That is, I don't think there is a lot of confidence in the prosecutorial side in Justice when it comes to complex investigations. In my experience with DEA, when you got out of the southern districts and eastern districts of New York or the central district of Florida, you didn't find a whole lot of trial expertise in prosecutors.

Mr. Sauber I doubt would recognize the inside of a courtroom, and he was managing that investigation. And the people who were dealing with it at the Justice Department I don't think had a whole lot of hands-on experience. I think there was a lack of competence in understanding it and a lot of fear of making a mistake.

I don't think it was because somebody was trying to protect GTE or protect other companies. I didn't think that was there. You couldn't shock me if you told me that. But as I said——

Senator GRASSLEY. Mr. Maxey, did you agree with his statement?

Mr. MAXEY. Could you repeat your question?

Senator GRASSLEY. Basically, he was the lead agent, you were working on it, in this investigation of trafficking in documents. Why was the investigation not expanded to the other companies, anywhere from 1 to presumably 25?

Mr. MAXEY. I agree with Mr. Segal.

In addition, I would add that it was probably a lack of resources also.

Senator GRASSLEY. Was it absolutely clear in your mind, Mr. Segal, that the Justice Department officials were aware of this widespread trafficking of documents?

Mr. SEGAL. Yes, sir.

Senator GRASSLEY. You personally made them aware of it?

Mr. SEGAL. Yes, sir; I did.

Senator GRASSLEY. Did anybody else?

Mr. SEGAL. I have had discussions with Brian Bruh, who was then in Mr. Mancuso's position. He told me he was involved with several high-level briefings at the Justice Department regarding that investigation.

Senator GRASSLEY. Please explain to me who you confronted with this evidence at the Justice Department and what the reaction was.

Mr. SEGAL. My only contact there was with, first, Mr. Sober and then with Mr. Silverstein. In fact, I never met anyone else in the Justice Department other than when I attended your subcommittee hearing prior to that day.

My briefings were to the people writing the investigation from the Justice Department. I have to assume that they briefed their other folks. I believe that I am probably speaking out of turn, and Mr. Maxey may have had some participation in talking to the Justice Department officials.

Senator GRASSLEY. In your recollection, is or was the Justice Department in possession of very hard evidence of the numerous companies being involved?

Mr. SEGAL. Yes, sir.

Senator GRASSLEY. Could you describe some of this evidence? I'm sorry, I didn't mean to interrupt.

Mr. SEGAL. That's fine.

I can describe it in general terms. We had, as I said, actually acquired a document, part of a 5-year plan. We physically acquired it from the grand jury subpoena.

We had pages and pages of witness debriefings from people involved with it right in the middle of the process that were there when documents were being exchanged, when people were meeting, people who were involved in moving documents around, who were involved in copying documents. It was not supposition on our part.

We weren't guessing that this activity was occurring. It was clear cut. The activity was occurring, and in fact the evidence was such that I believed it was prima facie. That is, you could have done little more than place it in a courtroom and let the evidence speak for itself.

Senator GRASSLEY. I think I might ask him to put in writing the flow documents that you made us aware of that describe some of this.

Senator PROXMIRE. Would you do that?

Mr. SEGAL. Yes, sir.

Senator PROXMIRE. Thank you.

I am delighted you referred to the time. We do have Mr. Fitzgerald and another witness coming up. And we are very anxious to hear from them.

But I do have a couple of quick questions, and perhaps you could give me a quick answer.

First, while you were working on the case, Mr. Segal, did you have contact with the Justice Department? If so, can you summarize the relationship of the investigators with the Justice Department's attorneys? Were the attorneys eager to prosecute the cases you brought to them? I think you have indicated they weren't, but I want to get it as explicit as I can.

Mr. **Segal**. We were in day-to-day contact. In fact, they actually had given us office space in Old Town, right down the street from where the prosecutors were housed. We had day-to-day contact with the prosecutors.

Senator **Proxmire**. What is the relationship? Were they enthusiastic? Did they recognize you really had a case? You indicated that they were very reluctant to get into this because you were not very confident in their ability to pursue this case.

Mr. **Segal**. They were extremely reluctant. The prosecutor who worked the case with us was coming toward the end of his career. Mr. Sauber, for some reason—I don't know why it was—but Mr. Sauber looked down on DCIS as an organization not capable of contributing much. They didn't want to be told what to do.

Senator **Proxmire**. Did you ever see the flowchart? Let me ask Mr. Maxey this.

Mr. Maxey, did you ever see the flowchart that Mr. Segal prepared?

Mr. **Maxey**. Yes, I did.

Senator **Proxmire**. Do you know where this flowchart may be located and how many other documents and evidence obtained in the investigation there are and where these materials are located?

Mr. **Maxey**. Yes, sir, Mr. Chairman, I last saw these articles in February 1986. They were located in the defense procurement fraud unit in Washington, DC.

Senator **Proxmire**. You heard Mr. Segal explain his contacts with the Justice Department. You described your relationship with Justice or the relationship between the investigators and the prosecutors was a good one. You also described the attitude of the prosecutors in these cases.

Mr. **Maxey**. Mr. Chairman, I would like to respectfully decline to answer that question because of the impact it may have on open cases.

Senator **Proxmire**. In your view, is it necessary, for your office to pursue this investigation, to get additional resources in order to do it? Did you ask the FBI for help? What was the FBI's response?

Mr. **Maxey**. I believed we needed additional resources. And there was an occasion when we did contact the local office of the FBI, who acknowledged that they would participate in the case, although they failed to provide any assistance.

Senator **Proxmire**. They said they would, but they didn't come through?

Mr. **Maxey**. Yes, sir.

Senator **Proxmire**. Did they give any reason why?

Mr. **Maxey**. No, sir, they did not. Not to my knowledge.

Senator **Proxmire**. Mr. Mancuso, one question for you. Isn't it true that as we speak, the investigative resources of your agency are being cut back?

Mr. **Mancuso**. Yes, sir.

Senator **Proxmire**. Isn't it true the investigators in the field are losing resources—they are getting less travel money, they are losing automobiles needed in their travel—despite the fact that the problems we are discussing today seems to be on the rise? The investigators are being hampered by cutbacks in resources?

Mr. **Mancuso**. The IG as a whole is being cut back, yes, sir.

Senator Proxmire. The IG as a whole, resources are being cut back?

Mr. Mancuso. The IG as a whole is being cut back due to the deficit problem, et cetera. We have taken a share of the cuts.

Senator Proxmire. Did anybody ever figure what the IG and the Defense Department saved? It's an enormous amount. I have been impressed from the figures I get from the IG. Over and over again they come in with reports in which they claim savings—and I am sure they are honest about it—of many, many millions, hundreds of millions of dollars, in some cases, billions of dollars.

And they are cutting that back?

Mr. Mancuso. I can say from the investigative side of it—we analyze that on a monthly basis—we get back over $17 for every dollar spent.

Senator Proxmire. You get back $17 for every dollar spent, but they are spending fewer dollars, so you're not getting that $17.

Mr. Mancuso. In other words, for every dollar that is applied to my unit, we generate, in fines and recovery, $17.

Senator Proxmire. So, if you spend $1 million, they get $17 million back?

Mr. Mancuso. Yes, sir.

Senator Proxmire. That is a pretty good return.

Finally, is it possible that higher officials in the Defense Department are unhappy with your investigators because they are embarrassing the Defense Department? Could it be that they are retaliating by cutting back the resources that the investigators need?

Mr. Mancuso. I have no reason to believe that.

Senator Proxmire. It seems pretty logical to me.

Mr. Mancuso. I can say that over the years——

Senator Proxmire. Well, I won't put you on the spot. You're a good man. [Laughter.]

Senator Grassley.

Senator Grassley. Just a couple of questions.

Mr. Maxey, I want to ask you the exact same question that I asked Mr. Segal at one point. Was it absolutely clear in your mind that Justice Department officials were aware of this widespread trafficking in documents?

Mr. Maxey. Yes, sir, they were.

Senator Grassley. You personally made them aware of it?

Mr. Maxey. Yes sir, I did.

Senator Grassley. Anybody else besides Mr. Segal that was involved in making them aware of it?

Mr. Maxey. Not to my knowledge.

Senator Grassley. I would like to have you explain whom you confronted with this evidence at the Justice Department and what their reaction was.

Mr. Maxey. Basically, I would have to go back to 1983. I was assigned to the case from 1983 until 1986. Over the course of that time, I dealt with both heads of the defense procurement fraud unit. I dealt with Bob Ogren, who was then the supervisor for the defense procurement fraud unit. And I dealt with the three attorneys who eventually at that time prosecuted GTE, handled the initial stages of the investigation.

Senator Grassley. I also had in my question what their reactions were.

Mr. Maxey. Basically, once we indicted the case and GTE pled guilty, the prosecutors handling the case were very supportive. I have no idea of how their supervisors felt about the case.

Senator Grassley. On another point, Mr. Maxey, we have learned that in September 1985 the Justice Department had intended to go before the grand jury and return an indictment against GTE. Obviously, this never happened.

Are you able to shed any light on why there was no indictment?

Mr. Maxey. At that time there were negotiations going on between the defense counsel, Mr. Brendan Sullivan, and higher officials in the Department of Justice.

I am unware, specifically, who they were. But at the last hour, the plea was negotiated.

Senator Grassley. The same Brendan Sullivan that defended Colonel North?

Mr. Maxey. Yes, sir; that's correct.

Senator Grassley. Who was involved in the negotiations for the Justice Department?

Mr. Maxey. To my knowledge, the only person I specifically recall was Ms. Toensing.

Senator Grassley. What was your reaction from you and the prosecutor as a result of those negotiations?

Mr. Maxey. I can't really address the feelings of the prosecutors. I think they should do that personally.

I thought it was a little frustrating.

Senator Grassley. Would you elaborate on that for us, please, your frustration?

Mr. Maxey. Basically, it was a long investigation. It got down to the final hour where a lot of issues were concluded, whereas in open court they wouldn't have been. But it was probably the most expedient manner of handling it at the time.

Senator Grassley. I also understand that you have a daily log of your time during the investigation. I wondered if you could provide a copy of that log to us?

Mr. Maxey. That was something I would have to clear through Mr. Mancuso, sir.

Senator Grassley. Can you clear it with Mr. Mancuso now?

Mr. Mancuso. I have no idea of which log he is speaking of. We don't require a daily log. So, I would want to see what he kept.

Senator Grassley. If you don't require a personal log or a log, then it must be his own private property. Right?

Mr. Mancuso. I would be concerned over the content if it included information on open cases.

Senator Grassley. Obviously, I don't want you to get in trouble, Mr. Maxey.

But if you can do that, I would like to have it. If you can't do it, I would like to know why you can't do it.

Mr. Maxey. Yes, sir.

[The following information was subsequently supplied for the record:]

Due to the nature of the contents of Mr. Maxey's daily log which contains evidentiary information regarding the open investigation of GTE/Zettl, we are not able to release the log to the subcommittee.

Senator GRASSLEY. Now, my last question, Mr. Chairman.

And this would be to anyone of you three or all of you: Is it your recollection that many consultants and contractor employees who traffick in classified documents do not have proper clearances?

Mr. SEGAL. Absolutely, from what I saw, Senator.

Senator GRASSLEY. Mr. Maxey.

Mr. MAXEY. In specific cases, there were individuals that had clearances, but they did not have clearances to all the information that they were passing.

Senator GRASSLEY. Mr. Mancuso.

Mr. MANCUSO. I know only what I have been told by the agents, and I have been told that is the case.

Senator GRASSLEY. Thank you.

Thank you, Mr. Chairman.

Senator PROXMIRE. Thank you, Senator Grassley.

Thank you, gentlemen, very, very much for an excellent testimony. We very much appreciate it. I know it has been uncomfortable for you. But it was certainly for a good purpose.

We will now hear from John Donnelly, Director of the Pentagon Defense Investigative Service; and Ernest Fitzgerald of the Office of the Comptroller of the Air Force.

Mr. Donnelly, I understand you have a statement you want to present or summarize.

STATEMENT OF JOHN F. DONNELLY, DIRECTOR, DEFENSE INVESTIGATIVE SERVICE, ACCOMPANIED BY JOHN FAULKNER, CHIEF, CLEARANCE DIVISION

Mr. DONNELLY. Thank you, Mr. Chairman.

This is John Faulkner, Chief of the Clearance Division of the Defense Investigative Service.

I welcome the opportunity to appear here today, Mr. Chairman and Senator Grassley, and to be more forthcoming than I was when you met in my office in September of this year.

First, I have submitted a prepared statement for the record, which I will not read. But I would like to make some summary remarks about it.

Senator PROXMIRE. It will be printed in full in the record.

Mr. DONNELLY. The Defense Investigative Service is an administrative body. We have two missions. We do personnel security investigations, and we run an industrial security program for the Defense Department and 19 other departments and agencies of Government.

In the industrial security program, we are involved in ensuring that the security regulations of the country are followed in industry.

Back in 1986, allegations which grew out of the Zettl case resulted in our receiving the order of the Office of the Secretary of Defense to investigate the companies that were mentioned in Zettl's request for subpoena.

In addition to those cases, we had a number of cases ongoing which turned up as a result of the Defense Investigative Service inspections in industry.

My predecessor established a task force which consisted of members from both our investigative side and our industrial security side. They initiated investigations in all regions of the country and here in Washington. This resulted in investigations of approximately 23—well not approximately—of 23 companies that were involved in some way or suspected of being involved in some way with bootlegging.

The bootlegging that we normally have experienced in the past dealt with scientists or engineers who would leave the Government, go to work for industry, and take copies of technical documents with them and establish their own libraries.

Other forms would be senior officers about to retire who would ingratiate themselves with the defense industry by providing them with budget and planning documents which they could use to plan their bids for upcoming contracts.

And perhaps the most pervasive would be independent, self-employed contractors or consultants who would be both consultants for the Defense Department and industry. They would have legitimate access in the Defense Department to some of the documents that we have discussed—budget and planning documents. They would make bogus copies, take them with them, and make them available to industry that they worked for to make themselves more valuable to industry. I have no knowledge of specific payments for given documents. It was to ingratiate themselves with industry.

Of the 23 cases that we investigated, we found that 15 of the companies, contractors were involved in a minimal manner and that it was not a systemic, company-approved effort, but individuals in the company were engaging in the obtaining of classified documents.

Eight of the companies were involved in what appeared to be systemic, company-approved activities, and those cases were referred to criminal investigative agencies.

Senator **Proxmire**. Eight, you say?

Mr. **Donnelly**. Eight, sir.

At the time that my predecessor wrote his memo in 1987, he made four recommendations.

The first was to require industry to establish a very strict document accountability procedure for all classified documents they received from the Department of Defense. For the most part, we have that accountability system in place. Secret and top-secret documents had to be accounted for strictly. We have not put in place as of yet accountability procedures for confidential documents. We are still trying to come up with the right words for confidential documents, because of the vast numbers of confidential documents produced in this case.

The second recommendation dealt with the Tri-Service Industrial Information Center which has the purpose of making available to industry classified documents dealing with upcoming contracts. Any industry that can establish a need to know that they have a right or would like to bid on given contracts can go to this Tri-Service Industrial Information Center and obtain the classified documents that they need.

The recommendation that my predecessor made was that the Tri-Service Industrial Information Center be audited to determine that its procedures were strict enough to ensure that documents were not being given out improperly. An audit was conducted by the Office of the Secretary of Defense, and the procedures being followed by that Center have been judged to be acceptable and proper.

The third recommendation was that the Defense Investigative Service be given administrative authority to cancel the security clearance of any individual in industry who refused to cooperate with us during the course of the investigations.

We do have the mechanism in existence now which does permit the emergency suspension of such an individual's security clearance. However, the decision is made at the OSD policy and the OSD general counsel level, not by investigators in DIS. And I do subscribe to this. It's better to have somebody who can objectively look at the evidence and make the decision rather than to have one of my investigators do it unilaterally.

The fourth recommendation was greater oversight be given to those agencies of the Department of Defense that share classified contracts with industry. We wanted to see that they were examined much more closely and make sure that their procedures were being strictly followed.

The Office of the Secretary of Defense for Policy did conduct and does still conduct oversight visits to those agencies. In addition, the DOD IG does conduct inspections of those agencies and also the area audit office conducts such inspections.

I have been given authority to make available to you and I have with me today the 15 closed cases that we were unable to make available to you during your visit to our office. These cases were not closed short. They are complete.

And we are making them available to you with the request that they not be made public because normally this information would be protected under the Freedom of Information Act through the exceptions and also by the Privacy Act.

So, I ask you and ask your staff to treat them as confidential.

I would be pleased to answer any questions that you have.

[The prepared statement of Mr. Donnelly follows:]

PREPARED STATEMENT OF JOHN F. DONNELLY

MR. CHAIRMAN, THANK YOU FOR THE OPPORTUNITY TO APPEAR BEFORE THE SUBCOMMITTEE TODAY TO DISCUSS THE INVESTIGATIONS CONDUCTED BY THE DEFENSE INVESTIGATIVE SERVICE (DIS) INTO THE SO-CALLED BOOTLEGGING OF CLASSIFIED INTERNAL DEFENSE DEPARTMENT INFORMATION BY DEFENSE CONSULTANTS AND CONTRACTORS.

IT MIGHT BE HELPFUL IF I WERE TO REVIEW FOR YOU A PORTION OF THE ROLE THAT DIS HAS AS ADMINISTRATORS OF THE DEFENSE INDUSTRIAL SECURITY PROGRAM. OUR MISSION IS TO ENSURE AS MUCH AS POSSIBLE THAT CLASSIFIED INFORMATION IN THE HANDS OF INDUSTRY IS PROTECTED AND THAT IF INFORMATION IS COMPROMISED, TO NOTIFY THE OWNER OF THE INFORMATION - THE GOVERNMENT PROCUREMENT ACTIVITY INVOLVED - OF THE COMPROMISE. IT SHOULD BE NOTED THAT A COMPROMISE OCCURS IF CLASSIFIED INFORMATION IS DISCLOSED TO AN INDIVIDUAL CONTRACTOR EMPLOYEE NOT AUTHORIZED ACCESS THERETO. THIS MEANS THAT SAID INDIVIDUAL MUST NOT ONLY HAVE A PERSONNEL SECURITY CLEARANCE AT THE PROPER LEVEL BUT ALSO HAVE A NEED-TO-KNOW FOR THE INFORMATION.

OUR INVESTIGATIONS ARE ADMINISTRATIVE IN NATURE; THEY ARE NOT LAW ENFORCEMENT INVESTIGATIONS. IF THERE HAS BEEN A COMPROMISE, DIS WANTS TO DETERMINE HOW THE COMPROMISE OCCURRED AND THE EXTENT TO WHICH ACTS OF CLEARED INDIVIDUALS WERE IN DISREGARD OF SECURITY REQUIREMENTS. OUR ULTIMATE OBJECTIVE IS TO HAVE CONTRACTORS MAKE

THE NECESSARY CORRECTIONS TO THEIR SECURITY PROGRAMS TO PREVENT A RECURRENCE. IN MOST CASES, NEW PROCEDURES OR STRICTER ADHERENCE TO CURRENT PROCEDURES ARE ALL THAT IS NECESSARY.

IN A SMALL PERCENTAGE OF CASES, ADMINISTRATIVE MEASURES TO REMOVE A FACILITY OR PERSONNEL SECURITY CLEARANCE MAY BE TAKEN. IN THE CASE OF A FACILITY, IF A CONTRACTOR PERSISTENTLY FAILS OR REFUSES TO DISCHARGE HIS OR HER SECURITY OBLIGATIONS, THE FACILITY SECURITY CLEARANCE MAY BE REVOKED. IN THE CASE OF AN INDIVIDUAL, IF THAT INDIVIDUAL INTENTIONALLY DISCLOSES CLASSIFIED INFORMATION TO AN UNAUTHORIZED PERSON, DELIBERATELY DISREGARDS SECURITY REGULATIONS WHICH RESULTS IN THE COMPROMISE OF CLASSIFIED INFORMATION OR COMMITS NONDELIBERATE SECURITY VIOLATIONS WHICH INDICATE A PATTERN OF NEGLIGENCE, HIS OR HER CLEARANCE MAY BE SUSPENDED OR REVOKED. IF THERE ARE INDICATIONS OF CRIMINAL INTENT, WE WILL MAKE A REFERRAL TO APPROPRIATE LAW ENFORCEMENT AGENCIES.

ON FEBRUARY 11, 1986, WE WERE DIRECTED BY THE DIRECTOR, SECURITY PLANS AND PROGRAMS, OFFICE OF THE DEPUTY UNDER SECRETARY OF DEFENSE FOR POLICY, TO INVESTIGATE ALLEGATIONS OF IMPROPER POSSESSION AND HANDLING OF CLASSIFIED MATERIAL BY REPRESENTATIVES OF SEVERAL LARGE DEFENSE CONTRACTORS. THESE ALLEGATIONS WERE CONTAINED IN A TRANSCRIPT OF A HEARING TO QUASH SUBPOENAS DRAFTED BY THE DEFENDENTS IN THE "BERNIE ZETTL CASE." THE ~~DEFENDENTS WANTED~~ TO SHOW THAT THE UNAUTHORIZED POSSESSION OF CLASSIFIED PROGRAMMING, PLANNING AND BUDGETING SYSTEM DOCUMENTS IS A WIDESPREAD PRACTICE BY DEFENSE CONTRACTORS.

IN OUR INSPECTIONS OVER THE YEARS, WE HAD FOUND INSTANCES OF BOOTLEGGED DOCUMENTS. WE USE THIS TERM FOR DOCUMENTS FOUND IN A FACILITY FOR WHICH THE FACILITY DID NOT HAVE THE AUTHORIZATION TO POSSESS. A COMMON FORM OF BOOTLEGGING IS THE SITUATION WHERE TECHNICAL PERSONNEL ACCUMULATE THEIR OWN "PERSONNEL LIBRARY" OF CLASSIFIED INFORMATION. THIS LIBRARY MAY CONSIST OF OLD CLASSIFIED ENGINEERING NOTEBOOKS, COPIES OF CLASSIFIED PROPOSALS OR COPIES OF PROCEEDINGS FROM CLASSIFIED CONFERENCES.

ANOTHER FORM OF BOOTLEGGING IS THE OBTAINING OF CLASSIFIED INTERNAL GOVERNMENT PLANNING AND BUDGETING DOCUMENTS. SOMETIMES, THIS TYPE OF INFORMATION CAN BE OBTAINED LEGITIMATELY AND IS HELPFUL TO DEFENSE CONTRACTORS IN THEIR EFFORTS TO DEVELOP THEIR STRATEGIES AND MARKETING PLANS. AT OTHER TIMES, INDIVIDUAL CONTRACTOR EMPLOYEES MAY OBTAIN THESE DOCUMENTS OUTSIDE OF REGULAR CHANNELS FROM SOMEONE IN THE GOVERNMENT OR IN THE EMPLOY OF ANOTHER COMPANY.

AT THE TIME DIS RECEIVED THE DIRECTION TO INVESTIGATE THE ALLEGATIONS, WE HAD SEVERAL CASES INVOLVING OTHER COMPANIES WHERE WE HAD FOUND CLASSIFIED PLANNING DOCUMENTS. WE DECIDED TO FORM A TASK FORCE TO THOROUGHLY INVESTIGASTE THESE CASES, OTHER CASES THAT MIGHT BE DISCOVERED AND THE ALLEGATIONS CONTAINED IN THE TRANSCRIPT. WE EVENTUALLY HAD 23 COMPANIES INVOLVED IN THE INVESTIGATION.

THE DEFENSE CRIMINAL INVESTIGATIVE SERVICE (DCIS) WAS WORKING THE FRAUD OR CRIMINAL ASPECTS OF CASES INVOLVING UNAUTHORIZED

POSSESSION OF CLASSIFIED PLANNING DOCUMENTS AT THE TIME THE TASK FORCE WAS FORMED. TO FURTHER OUR COMMON AIMS, WE SIGNED A MEMORANDUM OF UNDERSTANDING WITH DCIS WHEREIN BOTH PARTIES AGREED TO SHARE INFORMATION AND CONTRIBUTE TO A COMMON DATA BASE. ALSO, DIS DID NOT WANT TO UNDULY INTERFERE WITH THE DCIS CASES.

THE INVESTIGATIONS BY DIS CONSISTED OF INTERVIEWING PERSONNEL AT EACH COMPANY, EXAMINING ACCOUNTABILITY AND RECEIPT AND DISPATCH RECORDS AND INSPECTING SECURITY CONTAINERS. IT MUST BE REMEMBERED THAT DIS DOES NOT HAVE THE POWER TO SUBPOENA RECORDS OR TO USE OTHER LAW ENFOCEMENT TOOLS. WE DO HAVE THE RIGHT TO INSPECT A DEFENSE CONTRACTOR'S FACILITY BY VIRTUE OF THE SECURITY AGREEMENT THE CONTRACTOR SIGNS WITH THE DEPARTMENT OF DEFENSE.

WE FOUND NO INDICATION THAT ANY DEFENSE CONTRACTOR HAD A POLICY TO OBTAIN UNAUTHORIZED CLASSIFIED DOCUMENTS. MOREOVER, WE DID NOT FIND ANY EVIDENCE THAT SUCH A PRACTICE WAS CONDONED. WE DID FIND, HOWEVER, INSTANCES WHERE INDIVIDUAL EMPLOYEES OBTAINED UNAUTHORIZED CLASSIFIED DOCUMENTS. IN SOME CASES THESE DOCUMENTS WERE MISHANDLED; THAT IS, THEY WERE NOT MAINTAINED IN ACCORDANCE WITH PROPER SECURITY PROCEDURES AND WERE SUBJECT TO BEING ACCESSED BY UNCLEARED PERSONS. IN OTHER CASES, THE DOCUMENTS WERE PROPERLY HANDLED, BUT WERE COMPROMISED BY VIRTUE OF CLEARED PERSONS HAVING ACCESS WITHOUT THE PROPER NEED-TO-KNOW.

THERE WERE 12 COMPANIES WHERE SOME EMPLOYEES HAD LIMITED

INVOLVEMENT WITH UNAUTHORIZED DOCUMENTS. MOST OF THIS INVOLVEMENT WAS MINIMAL AND ISOLATED. THERE WERE SEVERAL COMPANIES WHERE IT WAS MORE EXTENSIVE. THESE COMPANIES, THERE ARE EIGHT AS WE UNDERSTAND IT, ARE UNDER INVESTIGATION BY DCIS FOR POSSIBLE CRIMINAL PROSECUTION. IN ONE CASE, PRESENTLY IN THE HANDS OF THE DEPARTMENT OF JUSTICE, AN ARMY OFFICER ALLEGEDLY GAVE A DOCUMENT TO A CONTRACTOR EMPLOYEE IN ORDER TO SECURE FUTURE EMPLOYMENT. THIS CASE IS SCHEDULED TO GO TO TRIAL.

IN THOSE CASES WHERE DIS FOUND UNAUTHORIZED CLASSIFIED DOCUMENTS, WE NOTIFIED THE OWNERS OF THE INFORMATION OF THE COMPROMISE, AND WE TOOK ACTION TO REMOVE SECURITY CLEARANCES IF WARRANTED. MR. CHAIRMAN, I WANT TO EMPHASIZE THAT OUR REMEDIES ARE ADMINISTRATIVE; CRIMINAL MATTERS ARE THE PURVIEW OF OTHER AGENCIES.

DIS SUBMITTED A FINAL REPORT ON THE TASK FORCE CASES TO THE DEPUTY UNDER SECRETARY OF DEFENSE FOR POLICY (DUSD(P)) ON MAY 29, 1987. IN THE REPORT, WE MADE FOUR RECOMMENDATIONS WHICH WE BELIEVED WOULD PLACE ROADBLOCKS IN THE WAY OF THOSE WHO WOULD ATTEMPT TO OBTAIN UNAUTHORIZED CLASSIFIED DOCUMENTS.

FIRST, WE RECOMMENDED THAT CHANGES BE MADE TO THE INDUSTRIAL SECURITY MANUAL WHICH WOULD REQUIRE DEFENSE CONTRACTORS TO IDENTIFY THE INDIVIDUAL WHO RELEASES DOCUMENTS TO BE HAND-CARRIED INTO THE CONTRACTORS FACILITY, TO IDENTIFY THE SPECIFIC OFFICE FROM WHICH DOCUMENTS WERE RELEASED AND TO MAINTAIN COPIES OF RECEIPTS FOR

DOCUMENTS RECEIVED BY THE CONTRACTOR. THESE RECOMMENDED CHANGES WERE APPROVED FOR COORDINATION BY THE DUSD(P). THAT COORDINATION HAS BEEN COMPLETED AND THE CHANGES HAVE BEEN FORWARDED TO THE DUSD(P) FOR APPROVAL.

SECOND, IT WAS RECOMMENDED THAT BECAUSE CLASSIFIED PLANNING DOCUMENTS ARE READILY AVAILABLE FROM THE TRISERVICE INDUSTRIAL INFORMATION CENTER FOR THOSE DEFENSE CONTRACTORS WHO HAVE AN ESTABLISHED NEED-TO-KNOW, THE PROCEDURES AT THE CENTER SHOULD BE AUDITED. THE INTERNAL CONTROLS AT THE CENTER WERE AUDITED BY A MEMBER OF THE DUSD(P) STAFF, WHO DETERMINED THAT THEIR CONTROLS WERE ACCEPTABLE AND THAT THERE IS A SYSTEM IN PLACE TO DETERMINE NEED-TO-KNOW, APPROPRIATE CLEARANCE LEVELS AND STORAGE CAPABILITY.

THIRD, WE RECOMMENDED THAT DIS BE GIVEN THE AUTHORITY TO ADMINISTRATIVELY TERMINATE THE PERSONNEL SECURITY CLEARANCE OF CONTRACTOR EMPLOYEES WHO REFUSE TO COOPERATE DURING INVESTIGATIONS. THE DUSD(P) STATED DIS SHOULD ADVISE EMPLOYEES WHO FAIL TO COOPERATE WITH AN AUTHORIZED INVESTIGATION THAT SUCH FAILURE MAY REFLECT UNFAVORABLY IN DETERMINING ELIGIBILITY TO RETAIN A SECURITY CLEARANCE. FURTHER, THE EMPLOYEES WERE TO BE MADE AWARE OF THE ADJUDICATION CRITERIA USED BY THE DIRECTOR, INDUSTRIAL SECURITY CLEARANCE REVIEW, IN ADJUDICATING INDUSTRIAL CLEARANCE CASES.

LAST, WE RECOMMENDED THAT ALL DOD ACTIVITIES WHO HAVE CLASSIFIED

INVOLVEMENT WITH INDUSTRY BE PERIODICALLY AUDITED TO ASSURE THAT THE ACTIVITIES WERE FOLLOWING APPLICABLE SECURITY REGULATIONS. WE WERE INFORMED THAT OVERSIGHT VISITS TO VARIOUS DOD ELEMENTS TO ENSURE COMPLIANCE WITH THE REGULATIONS ARE NOW CONDUCTED PERIODICALLY BY MEMBERS OF THE DUSD(P) STAFF, AND THAT THE ACTIVITIES ARE ALSO AUDITED BY THE DOD INSPECTOR GENERAL AND OTHER AREA AUDIT OFFICES.

MR. CHAIRMAN, I AM FURNISHING A COPY OF EACH CLOSED INVESTIGATION TO YOU FOR YOUR OFFICIAL USE. HOWEVER, I AM NOT ATTACHING THEM TO MY STATEMENT FOR THE RECORD, SINCE THEY ARE NOT NORMALLY AVAILABLE TO THE PUBLIC UNDER EITHER THE FREEDOM OF INFORMATION OR PRIVACY ACTS.

THIS COMPLETES MY FORMAL REMARKS. IF YOU HAVE ANY QUESTIONS, I WILL BE HAPPY TO RESPOND TO THEM NOW. THANK YOU.

Senator **Proxmire**. The next witness is Ernest Fitzgerald, of the Office of the Comptroller of the Air Force.

Mr. Fitzgerald, you testified before this Senator almost exactly 20 years ago.

Mr. **Fitzgerald**. Yes, sir. That's correct. 20 years, 1 month, and 8 days.

Senator **Proxmire**. That was exciting testimony. I think this is going to be at least as interesting and informative.

You have done a magnificent job under the toughest possible circumstances. You certainly deserve the plaudits of your country, which you have served with great distinction.

I see that those 20 years have put a little silver in your hair—in fact, a lot of silver in your hair—but not much in your pocket.

Mr. **Fitzgerald**. That's correct. There's no profit in being at the top of the top or near the top of, to put it politely, the "fecal roster" of five Presidents. [Laughter.]

Senator **Proxmire**. All right, sir. We are delighted to have you here.

STATEMENT OF A. ERNEST FITZGERALD, MANAGEMENT SYSTEMS DEPUTY, OFFICE OF THE COMPTROLLER OF THE AIR FORCE

Mr. **Fitzgerald**. Mr. Chairman, Senator Grassley, you asked me to testify on the cost effectiveness of management approaches employed in some of the troublesome acquisition situations that you have studied, and in particular, the problem of insider trading; this bootlegging or black marketeering in documents and information, as you discussed.

But to summarize, I think the approaches are very costly and, as you have heard from other witnesses, not at all effective. There are good reasons for that. I think, as a matter of fact, some of the approaches that are being proposed and employed may even be counterproductive.

One of the things I wanted to comment on in your remarks about the seeming small amounts of bribery I think can be explained by the nature of bribery in this business, in the dealings between the Government and the cartel contractors, the giant systems contractors, primarily, and roughly the top 100, and those seeking to break into that cartel.

In my experience, and I think some of the other witnesses indicated this too, transactional bribery—that is, fee-for-service bribery—is rare in this business. It is typically not necessary to buy a specific service, because you buy the servant rather than the service.

And I think the most pernicious approach of this sort is the "revolving door." Military officers and civilians as well in positions of authority, in the acquisition business especially, can't avoid having their eye on the prize at the end of their Government service. It is immensely rewarding. It is not tens of thousands or thousands. It is hundreds of millions directly—billions and billions of dollars indirectly.

The worst effect is what these people do not do when they are still on Government service. It is not just a matter of what they do after they leave so much as what they don't do when they are on the public payroll. There is just no percentage for them, no profit, in kicking giant contractors, who may be their future employers, in the shins.

To the contrary, as Mr. Donnelly just said, there is a great effort put forth to ingratiate oneself to these giant benefactors. I am afraid that however well intentioned, the attempts to keep information from flowing to these people is futile.

I believe John Kennedy, President Kennedy, first said, "The United States Government is the only vessel, the only ship which leaks from the top."

I don't see any way practically to keep the Secretary of the Air Force from having lunch with the editors of Aviation Week—or "Aviation Leak," as we call it inside the building—and declassifying by saying certain things or from doing the same with top defense contractor officials.

The thing that makes the approach that is being tried so ineffective and so costly, I believe, is that it is mostly after the fact. I have nothing but admiration for the investigators who have tried so valiantly to chase down these misdeeds after the fact. But I think that, as they have expressed in their frustration, it is often futile.

I believe that if the full facts of the current investigative scandals are ever made available to the American taxpayers, the taxpayers and citizens at large are going to be much more surprised by what is considered legal than what is considered illegal.

The reason is that we have this flexible interpretation of what is legal, what is a fair price, what is classified, and so on.

I want to touch on a couple of things, but prior to that, I would like to make some remarks about what might be done in the way of prevention.

In the classic business and Government internal control systems, up until the mid-1960's or 1970's in this country, and certainly during the years of our industrial dominance, we tried to organize those functions of business and Government that were subject to discretion and abuse, such as procurement, acquisition, so as to minimize the opportunity for collusive fraud.

Most Christians are taught to pray, "Lead us not into temptation." We lead these folks into temptation to begin with by the way we organize the business. Classically we have tried to separate the acquisition function so that you have separate independent organizaitons responsible for specifying the requirements, for placing the order, oftentimes separate groups setting the specifications, yet another group certifying the receipt of the material or the service bought, yet another, the quality control people, certifying that it's good, and yet another to pay the bills once all the other desired aspects were found to be satisfactory.

We have combined these things in the procurement czar approach—or the warlord approach before it was elevated to the level of the Secretary of Defense—so as to combine these functions that should be organizationally independent and separate under one person, or one organization rather.

So, it is quite easy to rig bids. It is also very easy to change standards of performance after the fact so that one's favorite contractor can be pronounced as successful even though he met none of the original requirements. There is no check, no balance on these people.

So, we invite the kind of behavior that we're seeing through our collapse—which I am convinced has been deliberate of internal controls. That leads, in turn, to a collapse of external controls.

The crazy rules that are set in the understandings between the big contractors and the Government stewards inside the Pentagon, primarily, setting the rules for procurement, are made deliberately loose, flexible, so that what appears to be stealing is made legal.

One of the loosest of the rules, particularly in application, and the most abused, has to do with the set of rules for classified material.

I have something that staff could pass to you and Senator Grassley, a couple of examples illustrating that point.

Several witnesses expressed shock about having discovered in the hands of contractors the 5-year plan, the 5-year defense program, which until recently was not made generally available to any but very tame Members of Congress. As has been said, it was almost universally available in big defense industries. It is a part of the normal market intelligence operation of any big company to know what the plans for the customer are. And the big defense contractors, being adept at this, have always, to my knowledge, had access to the projected budgets of the Department of Defense.

As a matter of fact, we have briefings for them. We just haven't told you, Senator Proxmire and Senator Grassley. They have told them. I don't understand why it's necessary to buy this information for cash. Maybe the tightening of the rules has created a black market through the reduction in supply. Supply and demand is what creates black markets.

But if you will notice this memorandum, this would have been very valuable information to a person planning his business.

[The memorandum referred to follows:]

DEPARTMENT OF THE AIR FORCE
WASHINGTON, D.C. 20330-1000

OFFICE OF THE SECRETARY

10 September 1987

MEMORANDUM FOR GENERAL WATTS, SAF/AC

SUBJECT: Weapons Systems Costs and Projections

As you will recall from earlier correspondence on the subject, Dr. Amlie and I have continuing concerns about the integrity of our reports to Congress on weapons systems costs and projections. The current confusion over the so-called "outyears" of the Five Year Defense Program (FYDP) has heightened our concerns.

On several occasions in the past couple of months, I have raised the issue of the failure to reconcile the supporting detail of the FYDP "outyears" - FY 90, 91, and 92 - to the President's "top line" figures for those same years. As I understand it, the purpose of the PPBS is to produce a FYDP that reconciles the detailed projections and the "unconstrained" requirements with the "constrained" budget toplines of the President's program. Some people estimate that DOD expends over a million manhours per year to produce a FYDP. I have been told that the essential reconciliation was not done when the FYDP was prepared for this year. I would like to pursue this question, especially as it may affect our reports to Congress.

This brings me to the accompanying SECRET chart. We want to find out whether the figures we are using for "outyear" reporting are reconciled to the "88 PB plus 3% GROWTH" line ("the President's" figures) or the higher 88 PB projection. I presume that the highest projection depicted on the chart reflects the sum of the detailed projections contained in the Comptroller FYDP computer tape. I also presume that the "88 PB plus 3% GROWTH" is the "constrained" projection.

As noted above, the chart in question is "SECRET which greatly inhibits our discussion of this important matter. I would greatly appreciate your declassifying this chart so we can discuss it freely and over the telephone, both with our colleagues in the Pentagon and with interested parties in Congress. Senator Weicker and the DOD Inspector General have already declassified the mismatch figures for all of the Department of Defense. Therefore, I don't see why ours can't be declassified as well. In case you have not seen the correspondence, Senator Weicker's figures indicated that the excess of the unconstrained projections over "the President's budget" for the three "outyears" was $82.9B. The IG adjusted this figure downward to $77.2B to reflect off-setting receipts. Our mismatch for the three years is roughly proportional to the DOD excess and represents an increase of 7.3% of our total budget for the three years in question. More significantly, perhaps, it represents an excess of 20.5% above the lowest of the three projections on the attached chart, the "87 PB plus 0% GROWTH" line. As noted on the chart, this lowest projection is itself substantially above the House Budget Committee mark for 1988.

Because of the significance of this issue, I would greatly appreciate your personal attention to this matter and your support for getting the accompanying chart and its updates declassified so we can deal with the questions more easily. In this connection, I noted especially President Reagan's call for openness on the part of the Soviet Union in revealing their budget figures. In a speech on August 29, 1987, the President said:

> "The Soviets can also open their defense establishment to world scrutiny. They can publish a valid and comprehensive defense budget and reveal the size and composition of their armed forces. They can let their parliament, The Supreme Soviet, debate major new military programs."

We can set a good example, as well as doing ourselves a favor, by taking our heads out of the sand and dealing forthrightly with the very troubling projections depicted in the attachment. If we don't do it now, I'm afraid the matter might not be dealt with until the new Administration takes office in 1989. As I understand the new procedures, we are not scheduled to do an FYDP next year which will result in the Congress and the taxpayers being kept in the dark. Given this situation, it is all the more important that our current projections hang together at least as well as they have in the past. As the Chief of Staff and the Secretary wrote in their July 29, 1987 memorandum, "Keeping Congress Informed", many in the Congress believe that "the Air Force just isn't being honest in explaining the performance of their programs." They went on to write:

> "Our policy will continue to be to provide candid, timely assessments of problem areas or potential problem areas that could reasonably be of interest to the Congress. We'll just have to do it better."

Declassifying the attached document will be a good start in this direction. If you cannot do this right away, then I must raise the same questions that I raised about the March 12, 1986 memorandum from John M. Poindexter to the Secretary of Defense which I requested be declassified in my 20 August 1987 memorandum to you, Subject: Questions on SF 189. In this connection, I have not yet received an answer to this declassification request. I would appreciate a follow-up inquiry and an early answer.

A E Fitzgerald

Attachment

A. E. FITZGERALD
Management Systems Deputy

Mr. FITZGERALD. What this shows was—which subsequently came out, thanks primarily to Senator Weicker and his staff—this showed that the sum of the parts of our program budgets vastly exceeded even the very generous financial fiscal guidance from President Reagan, that the sum of the parts was enormously greater than its whole.

Senator Grassley has been harping on this for years, and he is correct.

We had documentary evidence that this was known to be a problem, but it was never admitted officially except to the partners in industry. This is the kind of misuse of the classification system and selective disclosure that destroys respect for it. There are certain secrets that ought to be kept. But I am afraid, without being personally critical of Mr. Donnelly and his staff, that our patriotism, the American people's and Congress' participation is being taken advantage of. The fact that we want to keep genuine secrets secret, is abused to sweep all sorts of misdeeds under the rug.

One more directly pertinent, perhaps—and staff can hand this to you—one more directly pertinent to the procurement scandals is this formerly secret document.

[The document referred to follows:]

UNCLASSIFIED
THE WHITE HOUSE
WASHINGTON

System II
90189

UNCLASSIFIED

March 12, 1986

Cap

MEMORANDUM FOR THE HONORABLE CASPAR W. WEINBERGER
The Secretary of Defense

SUBJECT: Implementation of the Recommendations of the President's Commission on Defense Management (U)

The implementation memo you sent to the President on March 3 has been revised to follow more closely the format and detail of the Commission report and has been put into NSDD format (Tab A). Attached at Tab B is a proposed public announcement which we plan to release after your review. Appropriate draft letters to both Houses of Congress are at Tab C. (S)

The NSDD is intended to strengthen your hand vis-a-vis the legislation now in both Houses and maintain your control of the implementation process. We have tried to be sensitive to the President's desire to implement the Commission's recommendations without infringing on your authority or prerogatives. (C)

The events of the past week have demonstrated that the Hill has been most favorable toward the Commission's report. The report thus gives the President considerable leverage in dealing with the more radical proposals for reform that now abound in both Houses. Because of our need to sustain momentum on this and your pending trip to Europe, I hope we can have your comments this week before you leave. (C)

FOR THE PRESIDENT:

John

John M. Poindexter

Attachments

UNCLASSIFIED OADR

Declassified/Released on 9-8-87
under provisions of E.O. 12356 (F87-1316
by N. Menan, National Security Council

UNCLASSIFIED

Mr. **Fitzgerald**. This document, as you will see when you get it, is a copy of a memorandum dated March 12, 1986 from Admiral John Poindexter for the President—he is speaking and acting for the President of the United States in this instance—to Caspar Weinberger, the Secretary of Defense.

In this document, Admiral Poindexter reveals what some of my friends and I have charged for a long time and knew at that time to be the case, namely, that the so-called Packard Commission Plan was a secret operation of the National Security Council, part of which is still secret, aimed not at cutting costs of material to the Department of Defense and the taxpayers or improving the quality, but rather at heading off what Admiral Poindexter called "the more radical reforms in Congress."

That was the purpose of that operation. He refers here to National Security Decision Directive 219, part of which is still secret.

One of the parts that was secret at the time, which has subsequently been disclosed, was the so-called "current responsibility provision"—I am sure the investigators are aware of it—which holds that defense contractors should not be held liable for their misbehavior in the sense that they would be disbarred except for current ongoing misdeeds.

In other words, that would be analogous to saying to a common criminal that you are only accountable for robbing, bashing, or raping while you are actually robbing, bashing, or raping.

It is an absurd rule. Yet, this was buried in secret documents. This still has not been fully discussed. We still have people endorsing the Packard Commission as another of the panaceas that come to aid us.

Well, I didn't want to belabor those issues, but I want to put them in the record so that you can study them to see what might be done to end this sort of abuse which destroys all respect for the classification stamp.

Who can have any real feeling that the Poindexter-Packard scam, which is outlined in Admiral Poindexter's memo, has any legitimate reason to be stamped secret? He is talking about a scheme to bamboozle Congress and the taxpayers.

This is widely known amongst the defense contractors. They all knew about it. The key operatives on the Packard Commission had gross conflicts of interest from their industry connections, including the Chairman himself. And the information is common knowledge in the industry.

We also find that, through arrangement, there is very little that is really secret in the proprietary data that we hear talked about so much. And this is by arrangement through the Department of Defense.

There is ample evidence that much of the material that is said to be proprietary is commonly available within the Defense Department and within the defense contractor community. Much of it is being kept secret to prevent you, Senator Proxmire, Senator Grassley, and people who should know from knowing how grossly fat the contracts are.

This again is part of our breakdown in internal controls which has led to a breakdown in external controls.

I would be pleased to expand on these or any other points as you wish.

Senator **Proxmire**. Thank you very much, Mr. Fitzgerald.

I asked the previous witnesses and I am going to ask you how much is this trafficking in black material, classified material, how much, in your judgment, is this costing the American taxpayer? Do you have any notion? Can you give us a global figure? In the millions of dollars?

Mr. **Fitzgerald**. I suspect that the direct costs—that is, the transactional bribery costs—are relatively modest.

Senator **Proxmire**. As I understand it—and maybe I misunderstand this whole situation—what happens is that by getting this classified information, it is possible to secure a better deal from the Federal Government from the standpoint of the defense contract. That's why they buy it.

Mr. **Fitzgerald**. Sure. It deprives the Government, as the Billy Mitchell statute said, of the benefits of a free and open competition. And many other rules and measures of the Department are subverted.

Senator **Proxmire**. Explain exactly how that works. How does it deprive the Government of free and open competition?

Mr. **Fitzgerald**. By having inside information in the hands of a select few, they know what to bid on and what to bid, what the bids are going to graded on, who is going to do the grading.

Senator **Proxmire**. So, you may have, for example, the Stealth bomber or some other very expensive procurement, you might have four or five major bidders, but one is able to buy the classified information and therefore take advantage of it in a way that would give him a better price.

Mr. **Fitzgerald**. Yes, sir. At lower levels certainly. At higher levels, obviously, the Stealth bomber was bid rigged in the Pentagon or the White House, wherever it was done. There was no open bidding on that.

Senator **Proxmire**. You see, I think that the morals and the ethics involved here are shocking. There is no question that we ought to act on it. But I would like to see if there is any kind of a dollar dimension that we can put on this.

It seems to me it probably cost the taxpayers plenty. But so far, the previous witnesses are excellent witnesses, but they weren't in a position to make a judgment.

Mr. **Fitzgerald**. I think we can. Let me give you some evidence that is in your own committee file, Senator Proxmire, and Senator Grassley has other evidence.

In 1973 we had hearings, when I was still working as a consultant in this committee, on the effect of even limited competition, what I call rivalries in reducing costs. But they were honestly run rivalries.

This testimony was given by a young man named Larry Yuspeh. You saw dramatic reductions in the unit costs of complex hardware that had previously been sole sourced when it was open to competition, reductions in costs of up to 70 percent. We are still seeing that, even with limited competition.

Senator Grassley had a series of measures that he offered called "creeping capitalism," which provided for a gradual increase in the percentage of true competitive bidding from—I have forgotten what the percentages were, Senator, but I think you eventually envisioned getting up to some modest level like 70 percent. If we had true open competition, the greasemen wouldn't have a foothold. If it was genuine, honest, advertised soliciations, sealed-bid responses, there would be very little market for this sort of thing.

I think what we need to do is open up the market, not close it more. Do away with some of the phony secrecy. Do away with the spurious close-hold rules that result in the Government doing the bidrigging, if nothing else.

Senator PROXMIRE. So, what you're saying is that if we stop this overclassification, if we declassify, made this available equally to all the bidders, even if we continued the classifications in some cases—we might do that—but if we made that available to all bidders on exactly the same basis, then we would get a more effective competition and we could save millions of dollars.

It's an enormously expensive procurement process we have in the Government.

Mr. FITZGERALD. We could save tens of billions of dollars. Not only that, we would open up the process to new players, which we desperately need.

The overhead structures and inefficiencies of the giant contractors are so gross that I despair of these people every being competitive in a true sense.

Senator PROXMIRE. So, you have the situation now where the only people who have the knowledge to make a responsible bid do it by buying it, by bribery, by buying and bribing defense of the Defense Department.

Mr. FITZGERALD. Or by arrangement through the Government.

Senator PROXMIRE. And that they are able to get contracts which would go at a lower price to the Government if it was made available to everyone.

Mr. FITZGERALD. Yes, sir.

And if the subcommittee would give me the time, I would like to show some viewgraphs. I promised the staff I would only show one. Pentagon bureaucrats really can't talk without these things. I want to give you an example of a case in which we had a limited competition, a rivalry that, as a matter of fact, had some improvement.

But the viewgraph will show George Washington deploring the enemies of our cause, the defense contractors.

[The viewgraph referred to follows:]

"THESE MURDERERS OF OUR CAUSE OUGHT TO BE HUNTED DOWN AS PESTS OF SOCIETY AND THE GREATEST ENEMIES TO THE HAPPINESS OF AMERICA. I WOULD TO GOD THAT THE MOST ATROCIOUS OF EACH STATE WAS HUNG ... UPON A GALLOWS FIVE TIMES AS HIGH AS THE ONE PREPARED FOR HAMAN."

General George Washington
Speaking about Revolutionary
War Contractors.

Mr. Fitzgerald. But in this viewgraph, you will recognize as a classic procurement community so-called learning curve or improvement curve depicting man-hours per unit.

I have doctored these. I have multiplied these numbers by a factor and taken it upon myself because this was considered to be competition sensitive. But I want to show you what a distorting label, what a misleading label this is.

These lines down here—points to "standard hours" lines—Senator Grassley, are your standard hours, or should-take hours per unit. You can see they are still just as fat as they were when you first started looking at them.

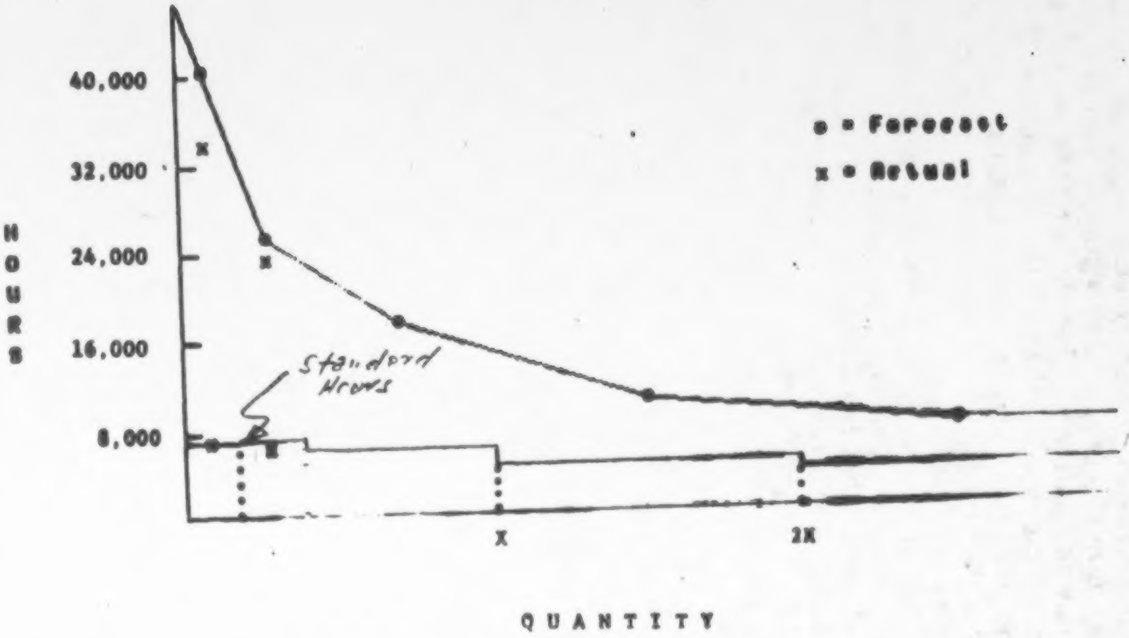
The top line are the projected actual hours for this complex piece of hardware, and the X's are what they actually achieved on this.

[The viewgraph referred to follows:]

FORMERLY CONTAINED ~~CONTAINS~~ COMPETITIVE SENSITIVE INFORMATION

CONTRACTOR A **REALIZED HOURS**

(FORECAST / ACTUAL)



Mr. **Fitzgerald**. Now, we had a separate contractor come in and bid, but it was limited to four people, limited to two contractors, as shown in the next two viewgraphs. The one was grossly inefficient, one was relatively efficient. But then we shook them down. In the first place we find that all the contractors, the big ones, know one another's rates and factors; that is, their rates of pay and the overhead factors that are laid on. The only mystery is in the manhours.

This is contractor A. Let's look at contractor B, an independent bid, so-called. This is highly inefficient by anybody's measure. Several times what the Japanese would spend.

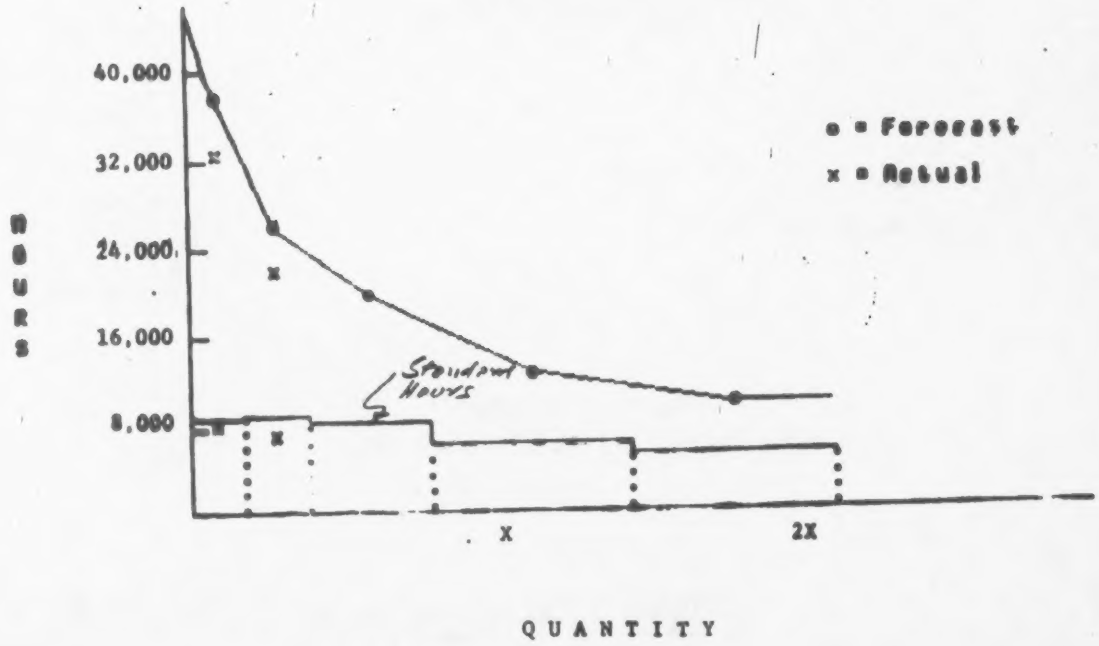
Let's look at contractor B compared to A.

[The viewgraphs referred to follow:]

FORMERLY CONTAINED [redacted]

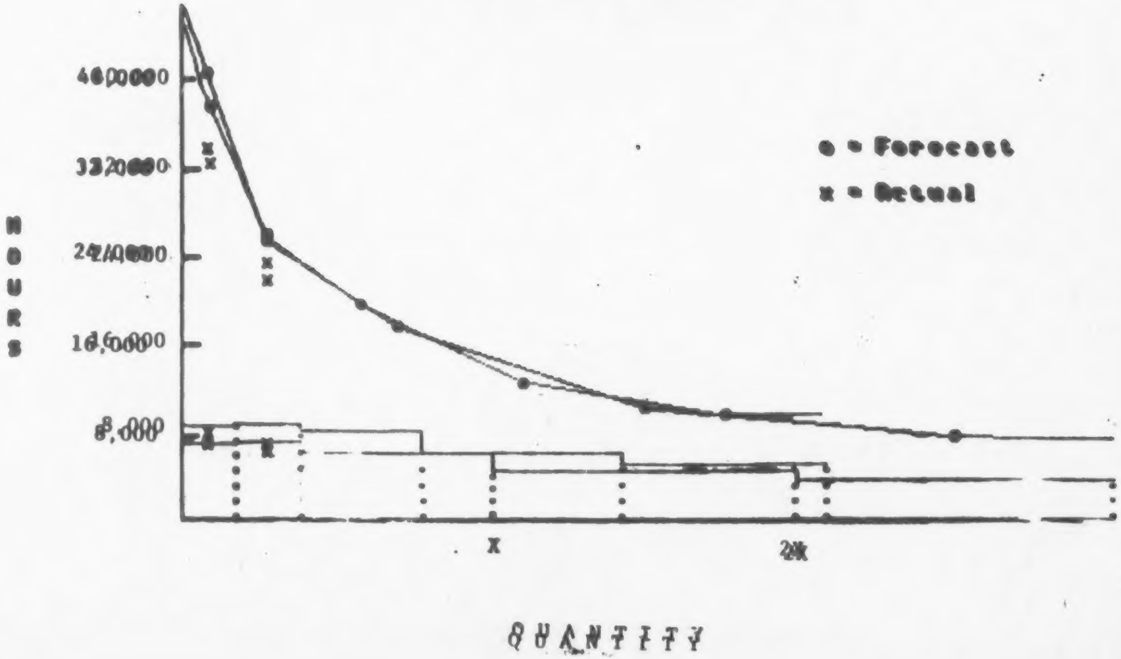
CONTRACTOR B **REALIZED HOURS**

(FORECAST / ACTUAL)



FORMERLY CONTAINED CONTAINS COMPETITIVE SENSITIVE INFORMATION

CONTRACTOR B REALIZED HOURS
(FORECAST / ACTUAL)



Mr. **Fitzgerald**. Coincidence? No way.

There is an easy explanation for this.

Senator **Proxmire**. You're saying they're exactly the same?

Mr. **Fitzgerald**. Yes, sir.

Senator **Proxmire**. Go ahead.

Mr. **Fitzgerald**. There is an easy explanation for this. This bid was rigged by the Government, and it's all legal. It's done by the common use of something called a CER, a cost estimating relationship.

One of these contractors actually made the CER on contract to the Government, and it's used by everybody else. So, they know what to bid. They are told what to bid.

We need new guys coming in fiercely competitive, hungry, who want to take this business away from these fat giants. I am not denigrating the effect of price rivalry. It has saved us some money. But it's not the same as free and open competition. I think that is what we need more of, the primary need, in addition to reorganizing ourselves inside the Pentagon, in a way that we can inhibit rather than encourage collusive fraud.

Senator **Proxmire**. OK.

I have about one minute left, and I want to ask, Mr. Donnelly, can you name the companies that have bootlegged classified documents in their possession? You have given us 15. Can you name the other eight? When you name the 15, name them all. Name the companies.

The 15 companies that were given you the investigative files are:

Analex Corp., Athco Systems Division, Booz-Allen & Hamilton, Cyprus International, Eaton Corp., EDO Corp., Honeywell, Inc., Litton Systems, Norton Systems, Inc., Northrop Corp., Raytheon Corp., Stafford, Burke & Hecker, TRW, United Space Boosters, and United Technologies.

Mr. **Donnelly**. In those 15, the investigations do not indicate that it was systemic within the company.

Senator **Proxmire**. You say these violations are not serious. What about the eight that were serious?

Mr. **Donnelly**. The eight that were serious are still ongoing, open criminal investigations. They were named in the May 29, 1987, memo that you have.

Senator **Proxmire**. Can you read those names?

Mr. **Donnelly**. The Boeing Co., Litton Systems, Inc., the——

Senator **Proxmire**. What was the first company?

Mr. **Donnelly**. Boeing Co., Litton System, Inc., Amco Division, McDonnell Douglas Corp., Northrop Corp., TRW, Inc., Sanders Associates, Inc., General Dynamics Corp., Martin Marietta.

Senator **Proxmire**. I have some more questions, but my time is up.

Senator Grassley?

Senator **Grassley**. First of all, I want to compliment Mr. Fitzgerald, as he always is able to do, for providing insights in the very complex organism of defense procurement and the agency is.

You always have a way of rendering the most complex situation into an understandable concept. And that's the kind of talent that the taxpayers need, and it's a most valued asset in this town. I thank you very much.

Also, Mr. Donnelly, I want to thank you for your cooperation in providing this material. You have asked us to be sensitive about the fact that it has certain restrictions on its dissemination to the public. I want to assure you that we will do that.

Mr. **Donnelly**. Thank you, Senator.

Senator **Grassley**. I have questions of both of you.

But I want to start with you, Mr. Donnelly. Is it true that DIS has an inspection policy that announces inspections beforehand by as many as maybe 3 weeks? Let me suggest why I ask that, because in our investigations we had at least two agents tell us that that was a policy. You call up the companies before you go in to investigate them, perhaps by 3 weeks, and say, "We're going to come in and investigate you."

Mr. **Donnelly**. We have two policies, Senator. One is to announce to the company that we are coming in to take a look at their security, their regulations; and another is an unannounced inspection policy; 15 percent of our inspections are unannounced. During fiscal year 1988 we conducted 19,000 inspections, a little over 2,800 of them were unannounced.

Senator **Grassley**. We were told that the unannounced phone calls—and I presume I am talking about the 15 percent that you were talking to—involved a phone call to the company before your people came. Would that be possible?

Mr. **Donnelly**. I don't thing that's the case. We do them at night. We do them at any time that we think it is likely that we will find something that shouldn't be.

Senator **Grassley**. I would say that based upon information that we have, I would ask you to look into the fact if those 15 percent, which you may be in good faith—and I don't question your good faith—say to us are totally unannounced, if in fact those really are unannounced in the sense that there isn't some indication we're going to come.

If there are, I guess I would still maybe raise the question with you—and this would be my next question—on those 85 percent where you do let them know ahead of time and maybe by as much as 3 weeks, if that's a very good way of going in and finding wrongdoing. Isn't that a little bit like before inspection in the military, they announce that at 0600 hours we're going to come in and inspect you? And everybody is going to have their shoes shined for sure.

Is that a very good way to do the business that you do?

Mr. **Donnelly**. I think that it's an orderly way. On the other hand, we are taking a look at our entire inspection procedures and looking at ways to be much more flexible.

We have a pretty good idea of who out there has excellent security precautions and are following the rules. We also have a pretty good idea of what companies are not devoting resources to their security programs, and we are going to concentrate more on those who are not.

Even during our announced inspections, we do conduct a number of steps which are likely to turn up and have turned up some indications of documents that were not properly stored. We conduct desk searches. We conduct unannounced interviews or unaccompanied interviews of personnel so that there is no one from the company with us when our inspectors are there talking to company employees.

This is particularly productive if you have an employee of one company who is an ex-employee of another. They seem more willing to tell us that company B was receiving documents that they weren't supposed to have.

These are some of the ways that we have turned up indications of bootlegging in the past and initiated a number of those investigations ourselves.

Senator GRASSLEY. You had a partnership in industry or partnership with industry program; right?

Mr. DONNELLY. Yes.

Senator GRASSLEY. Which contractors have the best performance in terms of the fewest violations of the security manual receive an award. That is correct?

Mr. DONNELLY. That is correct.

Senator GRASSLEY. Please explain how that program works.

Mr. DONNELLY. It's called the Cogswell Award. Our industrial security specialists who work in all regions of the country nominate one of the facilities in the region where they are assigned as being one which is exemplary in following the Department of Defense industrial security regulations. They document their case, and they send it up to their seniors.

At the end of the year we give this award to a certain number of companies that we think are the very best. Most of the companies, the big companies in particular, have good security resources devoted to the program. We only usually honor about 50 facilities with the award—50 facilities out of the more than 12,000 that we have out there each year.

Senator GRASSLEY. One of the major problems encountered in investigating contractor facilities is a lack of cooperation by contractor employees and particlarly with their attorneys. You mentioned this only in passing in your testimony or your formal testimony.

Is this a problem, in your view?

Mr. DONNELLY. If it is a problem, I don't think that we've run up against that very often, but if we do, then we can document that case, refer it to the Office of the Secretary of Defense, where a decision is made by OSD Policy and by the general counsel to have an emergency suspension of that individual's clearance.

We can also suspend a company's clearance, and we have done both.

Senator GRASSLEY. I am not necessarily disputing you, but I want to say that agents have told us that this is a very major stumbling block, especially during the DIS investigation of these 23 cases.

In addition, Thomas O'Brien, your predecessor, told your staff that lack of cooperation was prevalent during that investigation.

Given that, it seems to me that isn't it possible that these problems might be more widespread than we suspect?

Mr. DONNELLY. Let met turn that question over to Mr. Faulkner, Senator. He was much closer to these investigations that Mr. O'Brien was talking about during their pendency. That happened prior to my appointment.

Mr. FAULKNER. I don't think it's a real problem.

Senator GRASSLEY. Let me clarify. Mr. O'Brien told my staff that.

Mr. **Donnelly**. Mr. Faulkner was working for Mr. O'Brien.

Senator **Grassley**. I just wanted that made clear where it came from.

Mr. **Faulkner**. During our investigation, most employees of these contractors realize that there were criminal investigations going on. That's why they wanted their lawyers with them when they talked to us.

Ordinarily, in our normal business, we receive good cooperation from contractor employees. But at those times there is not a criminal case hanging over their heads.

Senator **Grassley**. Mr. Donnelly, in your third recommendation, you state that the DIS should have the authority to terminate the security clerance of contractor employees who refuse to cooperate during investigations.

Does this extend also to contractor attorneys?

Mr. **Donnelly**. To the contracting companies?

Senator **Grassley**. Their attorneys. The contractor attorneys.

Mr. **Donnelly**. If they have—if we can document the case that they are not being cooperative and if the personnel of the Office of the Secretary of Defense Policy and the general counsel of defense agree that we have the documented case, we can make an emergency suspension. It would only be temporary until the matter could be reviewed by higher personnel.

Senator **Grassley**. I think we need to make the point it seems like from what we found out, the attorneys are the biggest hindernace to the investigations that you have to do.

Now, this recommendation about attorneys was made back in 1987 by Mr. O'Brien. His recommendation was to give the DIS authority to terminate a clearance, period. So, we still have that contrast today to what you are saying a DIS agent can actually do now, which is to advise that maybe a clearance will be terminated.

Mr. **Donnelly**. Explain to them exactly the way the procedure is. He would go back, document the lack of cooperation.

Senator **Grassley**. It's kind of like just shaking a fist, though, instead of using a club that you can exercise.

Mr. **Donnelly**. Yes, sir, that's right.

I am not so sure that that's wrong. I have several thousand investigators out there. I wouldn't want to rely on the individual judgment of an investigator and let him be both investigator, judge, and jury.

Senator **Grassley**. Well, let me end my questioning with this. That is probably more of a statement than it is a question. And again, you are there where you are observing what might work or what might not work.

I am commenting on what it looks like on the outside, and with years of wrongdoing exposed and yet nothing being done about it, and still the public is out there waiting for a signal that it's not business as usual from the Pentagon.

It kind of strikes me that one of the basic problems with your office and of course that also of the Deputy Under Secretary of Defense for policy is kind of too much treating industry with kid gloves, too concerned about relations with industry an not enough about protecting the tax dollars of the public.

And again, referring to this partnership with industry program that you said maybe only benefits 50 or awards 50 out of 12,000, but you do present awards to companies with the best performance.

But when they have in 85 percent of the instances a warning before you come in, I doubt that is the way you are really going to find wrongdoing.

In the meantime, you have conducted investigations into 23 companies. All of your agents hit their respective companies on the same day. If I read the O'Brien memo correctly and if I judge our staff findings correctly, the vast majority of those 23 cases turned up one of the following either hard evidence of bootlegging or what you call isolated instances or a widespread lack of cooperation or what several agents refer to as closing cases short despite their turning up solid leads.

So, to me, Mr. Donnelly, your sub-rosa investigations turned up quite a bit. Obviously, the surreptitious approach is a lot more effective than sending out announcements.

And so might I suggest to you that a recommendation to terminate the policy of announced inspections would sit well with common sense. I hope you agree with that. That is what I am asking you to think about.

Mr. **Donnelly**. As I indicated, Senator, we are examining our entire inspection program, and we will take your recommendation into consideration.

Senator **Proxmire**. Thank you, Senator Grassley.

I just have a closing statement I would like to make.

Our witnesses revealed this morning more facts about the black market in Pentagon classified documents than have ever been revealed before to the American public. It is still going on. It is bigger than ever. In fact, we have only seen the tip of the iceberg. Even the Pentagon's inspector general has seen only the tip of the iceberg.

And the Justice Department is apparently assuming that the iceberg is a mirage that will melt away just the way the deficit will melt away as we "grow" out of our difficulties.

These facts reinforce my conviction that the scandal of defense procurement abuses will never be cleared up until the law enforcement system itself is cleared up and reformed. We cannot eliminate the black market unless we crack down on it.

Unfortunately, the Pentagon is not allocating sufficient resources to this problem, and the Justice Department seems incapable or unwilling to deal with it at all.

Finally, there is a line in the Beatles' Sergeant Pepper album that goes, "It was 20 years ago that Sergeant Pepper taught the band to play."

Ernie Fitzgerald has taught this Senator, Congress, and the Nation a lot about waste, fraud, and abuse in defense contracting over the past 20 years.

Mr. Fitzgerald, we appreciate your heroic efforts, and I feel confident that with people like yourself and Senator Grassley continuing your work, the band composed of American taxpayers will trumpet back to the Pentagon loud and clear that they want this mess in procurement cleared up.

This subcommittee will stand adjourned.

[Whereupon, at 12 noon, the subcommittee adjourned, subject to the call of the Chair.]

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